PRICE COMPETITION IN THE BRITISH COLUMBIA BREWING INDUSTRY:

PRESENT STATUS AND FUTURE PROSPECTS

By

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PART ONE:

THE HISTORY, ENVIRONMENT AND PROCESS OF MAKING AND DISTRIBUTING BEER IN BRITISH COLUMBIA

Chapter 1

Introduction

Terms of Reference and Overview of Inquiry

On February 26, 1982 the following letter of appointment was sent by the Minister of Consumer and Corporate Affairs initiating this inquiry:

February 26, 1982

LETTER OF APPOINTMENT

Dr. Michael Golberg,
Associate Dean,
Faculty of Commerce and Business Administration,
University of British Columbia
2075 Wesbrook Mall,
Vancouver, British Columbia.
V6T 1W5

Dear Dr. Goldberg:

Re: Price Competition in the British Columbia Brewing Industry -- Present Status and Future Prospects

This letter will outline the terms of reference for your inquiry into price competition in the British Columbia brewing industry.

It is almost a year since the retail price of domestic beer in liquor stores in British Columbia was deregulated. The objective of the deregulation initiative was, and is, to promote price competition among British Columbia brewers.

As the first anniversary of the deregulation initiative approaches, opinion is mixed as to the success of the policy in its first year.

Accordingly, the purpose of your inquiry will be to examine the domestic brewing industry in British Columbia and to answer these questions relative to the Deregulation Policy introduced in March, 1981:

1. To what extent has price competition in fact taken place?

2. What are the prospects for greater price competition in the future?

3. What are the barriers to greater price competition?

4. How does price competition among brewers in British Columbia in the last year compare with the level of beer prices and the level of beer price competition in the other provinces of Canada?

5. Assuming existing government policies in the various provinces remain constant, how do the prospects for beer price competition in British Columbia compare with prospects in other parts of Canada?

6. What further steps can the Provincial Government take through its Liquor Distribution Branch to further encourage beer price competition in British Columbia (consistent with maintaining reasonable job security in the British Columbia brewing industry)?

British Columbia brewers are prepared to provide you with access to their respective individual financial statements for the purpose of your inquiry.

Yours truly,

Peter S. Hyndman,
Minister.

In subsequent conversations with the Minister it became clear that the intent of the terms of reference was not to restrict the inquiry, but instead to provide initial guidance for understanding pricing and other forms of competition in the brewing industry in British Columbia. Using these terms of reference as a starting point, a research strategy was developed to address these questions and any additional questions arising in the course of the study.

Our research strategy is aimed at providing us with sufficient knowledge for reaching informed judgments about areas for improving competition in the British Columbia brewing industry. First, a series of interviews was scheduled with the senior managers of the four brewing companies operating in British Columbia. In addition, government officials responsible for overseeing the production and distribution of beer in the province and others having expertise in the field were contacted. A complete list of the people interviewed in the course of this study is appended to this report (Appendix 1). These interviews provided necessary background information on the production, distribution and regulation of malt liquor, a term encompassing all types of beer including ales, lagers, light beers, etc. They also provided insights into the impediments to competition in the brewing industry. A rich diversity of suggestions was made for removing these barriers and stimulating both price and non-price competition. As our inquiry progressed, it quickly became apparent that price was only one dimension of competitive behaviour, and that we would need to understand the whole range of competitive tools if we were to answer adequately the questions posed by the Minister. Thus, it was impossible to confine our efforts exclusively to price competition, and our focus was broadened to span the issues related to competition broadly defined, and the set of impediments to competition which currently exist in British Columbia.

Our second strategy was to develop a detailed annotated bibliography (see Appendix 2), and to collect relevant legislation and regulations dealing with the distribution and marketing of malt liquor in British Columbia. This review of the literature and of the regulatory environment provided further perspective with which to pursue our inquiry.

A third facet of the strategy focused on data collection and analysis. Several sets of data were required. First, we required a history of beer prices in British Columbia before and after price deregulation, as well as price information from other provinces to put the British Columbia price structure in context. Second, detailed cost information, data on the costs of producing, packaging, distributing and marketing beer (labour, materials, energy, and capital) were needed. We required these details of production costs over time so as to derive sophisticated statistical estimates of costs and their relation to varying levels of output. This will enable us to determine whether or not significant economies of scale exist, economies which would argue strongly for larger plants and fewer brewing companies. The data analysis is continuing, and the more technical detail will be forthcoming subsequently as a background report to the present document.

The final part of the research strategy involved a synthesis of the information obtained through the interviews, literature review, and data analysis in order to derive a set of policy recommendations. These recommendations represent the policy actions open to the Minister which would increase competition in the British Columbia brewing industry.

Conduct of Inquiry

Shortly after the establishment of this inquiry by the Minister, the foregoing strategy was developed and set in motion. Interviews with industry and government leaders were arranged and conducted. Visits to the corporate headquarters for the three national breweries were also arranged as was a visit to Ottawa to speak with federal officials and with the Brewers Association of Canada (BAC). More than four dozen people were contacted (Appendix 1). Data were requested from the breweries and from relevant government agencies, all of whom responded quickly and graciously. Because of the massiveness of the detailed cost data, and because of the technical sophistication of some of the estimates of scale economies, that work, as mentioned previously, is being published as a separate technical report and will be available in the future. Cost data are included in this report in more aggregate form.

A preliminary draft report (excluding the recommendations) was circulated on a limited basis in early October, 1982, to ensure that the facts of the report (Part I) were correct and that the brewing industry and its operation in British Columbia today were accurately described. Comments and corrections were incorporated into the final report.

Overview of the Report

This report is set out in three parts. Part I describes the brewing industry in British Columbia today and also provides a history of the brewing industry here and in the rest of Canada. The report then moves on to a brief discussion of the process of brewing and packaging beer. This discussion allows us to analyze the stages of beer production where cost savings and competitive pressures could serve the public interest through lower prices and increased choice.

Following this description is a sketch of the system for distribution of brewery products to consumers through the government liquor stores and licensees. The distribution system is complex and provides a further target for innovation to spur competitive behaviour. An examination of the marketing of beer is also included.

Pricing of beer is a complex subject, and occupies the entire next chapter. The pricing process is well specified, but not well understood by those outside the industry and government. Its elucidation suggests additional possibilities for stimulating competition.

Part I concludes with a review of the various regulations which impinge on the brewing, distribution, marketing and pricing of beer in British Columbia. The list is extensive and defines the legal/regulatory environment within which the brewing industry must operate.

In Part II of the report, we discuss our findings. In this section a detailed analysis of beer pricing in British Columbia and elsewhere in Canada is provided. Also included is a preliminary analysis of the cost data and a discussion of the effects of the regulatory environment. The structure of the industry both in British Columbia and the rest of Canada is also reviewed. These analyses provide the foundation for the recommendations.

Part III is comprised of a summary of the conclusions in Parts I and II as well as an extensive set of recommendations for regulatory and legislative reforms needed to provide the necessary environment to encourage greater competition. Also explored here are private sector responses that could be expected to occur in an altered and more flexible regulatory/legislative environment.

Acknowledgments

Any undertaking such as the present inquiry is dependent upon the cooperation of a large number of people who give of their time and resources. We were fortunate to have been granted interviews with the numerous people listed in Appendix 1. We would also like to explicitly thank those who extended their help well beyond anything we anticipated. First, Ms. Jill Bodkin, Deputy Minister, B.C. Ministry of Consumer and Corporate Affairs assisted us immeasurably in our requests for meetings with Ministry officials concerned with regulating and distributing beer in the province. Despite her extraordinarily busy schedule Ms. Bodkin always responded to pleas for assistance promptly and graciously. Other Ministry officials of particular assistance were Mr. Allan Gould, General Manager of the Liquor Control and Licensing Branch and responsible for licensees in the province. Mr. Bob Wallace, General Manager, and Mr. Lawrence Dyer, Director of Finance of the Liquor Distribution Branch (including the B.C. Government liquor stores) provided us with a broad range of information about the L.D.B. pricing and marketing of beer, and tutored us in the complexities of the listing and pricing mechanisms.

Second, representatives of private trade associations and councils spent a great deal of time with us and provided much needed background information. Again, the specific individuals and the organizations that they represent can be found listed in full in Appendix 1. We particularly wish to thank Margo Dewar of the Brewer's Association of Canada, for allowing us access to confidential industry documents.In addition, Gail Lenoski of Statistics Canada was very helpful in obtaining unpublished data necessary to complete our report.

Finally, perhaps our greatest debt of gratitude is owed to the four brewing companies and those responsible for managing them: Mr. Al Branston, General Manager, Carling-O'Keefe of B.C.; Mr. Graham Freeman, Vice-President and General

Manager, Labatt's of British Columbia; Mr. Hal Moran, President, Molson's of British Columbia; and Mr. Bill Sharpe, President, Old Fort Brewing Company. They allowed us access to highly confidential information about costs, revenues and marketing strategies. The costs to them and to their organizations of collecting the operating cost and revenue data were no doubt considerable, and we are grateful for their efforts to meet our tight time constraints. Messrs. Branston, Freeman and Moran also arranged for us to have access to the most senior people in their national headquarters: Mr. Morgan McCammon, Chairman, Molson Breweries of Canada Limited; Mr. Rod McInnes, Chairman, Carling-O'Keefe Ltd.; and Mr. Sid Oland, President Labatt's Breweries of Canada. In turn, they provided us with confidential data on their brewery operations in the other provinces, as well as taking the time to increase our understanding of the diversity of regulatory and marketing environments within which the Canadian brewing industry operates. Without the help of all of these industry representatives we could not have developed the report that the Minister sought, and we thank them for their assistance, graciousness and candor.

During the entire course of our work we received outstanding assistance from all the people we contacted. There was one notable exception which we also wanted to acknowledge publicly: The Bureau of Competition Policy of Consumer and Corporate Affairs Canada. In marked contrast to private industry representatives, these federal officials refused us access to all their internal reports relating to the brewing industry in Canada. This lack of cooperation was surprising, unfortunate and deserving of public acknowledgement.

This was clearly a unique exception and in the end has not hindered our research because of the generous help supplied by the breweries and by senior staff at the B.C. Ministry of Consumer and Corporate Affairs. Without such assistance this report would have been impossible. With it we have been able to develop a set of recommendations that we hope will broaden and deepen competition in the brewing industry in British Columbia.

History of the Brewing Industry in Canada

Introduction

Brewing in Canada has a long history dating back into the mid-seventeenth century. Indeed, the first brewery in Canada was founded in 1668 at Quebec City by Jean Talon, Intendant of New France to promote temperance.[1] As the following chronology shows, over the period 1668-1900 the brewing industry grew steadily and by 1900 the ancestors of all of the national breweries were born (Molson in 1786; Carling in 1840; and Labatt's in 1847).

CANADIAN BREWING CHRONOLOGY 1668-1900[2]

1668	Beer was brewed in Quebec City for the first time in a brewery erected by Jean Talon, Intendant of New France.
1786	The John Molson Brewery was founded in the City of Montreal.
1790	Thomas Dunn set up the brewing business in LaPrairie which was moved to Montreal in 1808. On Thomas Dunn's death the business was inherited by his assistant, William Dow.
1808	A brewery was established in Montreal by Miles Williams, Sr.
1811	Thomas Dawes built a brewery in Lachine.
1820	A. Keith & Son, Nova Scotia Brewery, was founded.
1822	John Farr established a brewery in Toronto.
1832	William Copland founded a brewing business in Toronto.
1832	A brewery was built in London by William and George Snell.
1833	A brewery was founded in St. John, New Brunswick, by Robert Keltie.
1834	James Taylor founded a brewery in St. Catherines.
1840	The original business of the Montreal Brewing Company was founded.

1840	Charles Hanneth founded a brewery in Toronto, the firm subsequently becoming Hanneth & Hart.
1840	The Carling Brewing & Malting Company Limited of London was established by Thomas Carling.
1844	J.K. Boswell purchased the John Racey plant in Quebec City. This brewery had been established early in the century.
1845	The Ekers Brewery was founded in Montreal by G. Bowes and A. Ellis, the firm becoming Bowes & Ekers in 1853.
1847	Labatt & Eccles purchased from John Balkwell the brewing business which was originally established in London by William and George Snell.
1852	G. Reinhardt entered the brewing business in Montreal.
1856	Canada's first malt-house was built in Galt by Thomas Peck and John Dykes.
1862	Eugene O'Keefe took over the business of Hanneth & Hart (founded in 1840).
1862	About this year a brewery was founded by a Mr. Gibson in New Westminster, British Columbia.
1863	Patrick Cosgrave founded a brewing business in Toronto.
1867	Oland and Son Limited was founded in Halifax.
1872	Herchimer & Batkins founded a brewery in Winnipeg which was leased by Edward L. Drewry in 1877, and purchased by him in 1882.
1874	The Toronto Brewing & Malting Company Limited was incorporated, the original brewery having been erected in 1846.
1878	Canada Brewers and Maltsters Association was formed with John Severn as its first president. He had erected a brewery in Yorkville in 1835, and others in California in 1850, Davenport, Iowa, in 1859 and Belleville in 1874.
1879	James Ready commenced brewing operations at Fairville, New Brunswick.
1882	The British American Brewery was founded at Windsor, Ontario, by Louis Griesinger of Detroit, Michigan.
1886	H.A. Eckers installed a refrigerating machine, and also introduced the first beer filter and the first carbonator in the province of Quebec.

As a result of this growth by 1916 there were over 40 breweries in Ontario alone. Unfortunately, many were forced to close as a result of the Ontario Temperance Act of 1916-1927. The only beer that could be sold during the period was to patients with a prescription. The Liquor Control Act of 1927 provided wider legislation which allowed the sale of beer for home consumption, and resulted in an increase in the number of breweries in Ontario to 37 (close to the previous number in 1916). The 1934 and the 1946 Liquor Control Act amendments extended the rights to sell beer and increased the number of outlets. The beer industry in Canada experienced a reduction in production and sales between 1929-1933 due to the Depression and the great stock market crash, after which it experienced almost continuous growth. The growth in beer consumption has prompted great expansion in the brewing industry but this expansion has been accompanied by numerous mergers, causing the industry to be dominated by three large breweries, Carling-O'Keefe, Molson and Labatt. Today, these breweries supply 97% of the Canadian beer market.[1] The oligopolistic structure of the market makes traditional open competition unlikely; instead, it favors joint control over market variables, price leadership by the market leader and promotional efforts to try to differentiate similar products. The brewers' response to criticisms of price and product uniformity tends to focus on the control by the governments, provincial and federal, and on growing homogeneity in tastes by consumers. The regulation of the beer industry and the expansion of the three major breweries have largely determined the structure of the brewing industry in Canada. A history of the three major beer companies and some smaller independent companies follows. We also briefly review here the history of government regulation of the brewing industry.

Canadian Breweries

The "Brewing Corporation of Ontario Ltd.", incorporated in 1930, became "Canadian Breweries Ltd." (CBL) in 1937. (The name change did not mark a change in policy or purpose of the company.) Mr. E. P. Taylor, the compelling force behind the organization, was president from 1930 to 1944 and thereafter a member of the board. The strategy of the company was to "acquire the ... control of sufficient number of selected brewing corporations in Ontario to establish itself as a dominant factor in the brewing business within that Province."[3] Pursuant to this policy, from 1930-1953 CBL acquired 23 brewing companies in Ontario (mostly through the exchange of shares), each having one plant. Of these 23 breweries, CBL closed 12 and operated 11 plants. Excluded from the merger strategy were the northern breweries, Capital Breweries Ltd., and John Labatt Ltd. The former was considered to be just "a local brewery", and the latter was avoided due to the possibility of a monopoly situation developing, which would arouse government interest and result in possible conflict between CBL and the government.

Between 1934 and 1939 CBL acquired eight plants in the Toronto area, fulfilling the original strategy. CBL hoped that, with control of Toronto, Labatt could be persuaded to agree to a quota system. Carling Breweries Ltd. in London, Ontario, was one of the eight acquired plants in the Toronto area. Carling was in a weak financial position, although very strategically placed, when CBL acquired control. In 1936 the Carling plant in London was closed and production was shifted to the Kuntz plant (acquired in 1930). According to Taylor, plant closures slowed after this time so as to limit the growth of competitors' business.[5] Otherwise, Taylor reasoned, the small competitors could take advantage of decreases in industry capacity and CBL might find future acquisition more difficult.

Some of the acquisitions during this period were of firms that had financial security, such as O'Keefe and Canada Bud. During the period 1930-1939 the total capacity of CBL in Ontario was decreased by 46% due to closures of plants that had been previously acquired. Concentration in the brewing industry increased, accompanied by a decrease in the number of brands and plants. In addition, the CBL market share increased to 34.9% from 11.2%; a drastic increase attributable to CBL's mergers.

During the Second World War the government's limitation on raw materials for brewery expansion and the increased demand for beer favored CBL; it was able to utilize its existing excess capacity. E.P. Taylor capitalized on the government wartime policy, by extending CBL's strategy with the acquisition of Capital, Bixel and Walkerville in 1944. Another significant acquisition was that of Dominion Malting Co. Ltd., a major supplier of malt (a major input in beer production, as we will see in the following chapter). This acquisition was prompted by the refusal of the only other malting company to supply CBL. After acquisition, Dominion Malting did however supply other brewers and thus was able to increase both sales and earnings.

By 1954 there were only two other brewing companies, Labatt and Formosa (a small local producer), in southern Ontario. Some competition however did remain between Molson and National Breweries, both of Quebec; and between Labatt and CBL, both based in Ontario. The small number of competitors made feasible a written agreement that would bind these brewers on matters covering loans, interests in retail outlets, rebates, free samples, and all areas where the brewer could depart from the fixed price of the Ontario Brewers Warehousing Co. This agreement was signed in 1947 by the Ontario Brewers Association; a similar agreement had already been in force in Quebec since 1946.

Canadian Breweries expanded internally, reacting to the increase in post-war demand. The 21 CBL plants had a combined capacity of 1.14 million barrels in 1930, with $30 million invested in building and machinery. The ten plants operating in 1954 produced 3.11 million barrels, a 173 percent increase in capacity.[6] As a result of the acquisitions and expansions, CBL owned more than 60% of the brewing capacity in Ontario (CBL's increase in market share to 64.4% appears to be the result of the acquisition of Peller in 1953), as well as having more than 50% of brewing industry in Ontario and Quebec combined. Ontario was CBL's largest market, although beer was still shipped to the western provinces and the Maritimes in 1955.

In Quebec we see a parallel development in the brewing industry led by Molson's and National Breweries. National Breweries Ltd. became a holding company in Quebec in 1909, amalgamating 14 breweries and closing 10. National had the majority of the brewing market in Quebec. In 1948 it bought two additional breweries to make a total of six breweries, however its market share continued to decline as a result of competition from Molson's.

Molson was the only producing competitor in Quebec and it grew at the expense of National after the Second World War. A drop in National's sales in 1951 prompted the closure of two plants, one in Montreal and one in Champlain, and the sale of Frontenac Breweries Ltd. of Montreal, to

CBL. CBL had purchased land in Montreal for expansion into Quebec. However, the 1950 defense program curtailed the supply of commercial steel, thus limiting CBL's development and prompted the Frontenac Breweries acquisition by CBL.

In June 1951, aware of National's financial trouble, E.P. Taylor proposed a modified offer directly to National's shareholders, after the Directors of National rejected a previous offer. CBL purchased a controlling share of National Breweries in March of 1952; the name of National Breweries Ltd. was changed to Dow Brewery Ltd. in May of the same year. Three of National's brewing plants remained and the number of brands was decreased to four from nine. Prior to the National Breweries acquisition, CBL's market share reached a maximum of 13% in Quebec; after the acquisition the market share jumped to 50.7%.[7]

In 1952 CBL began to decentralize its seven wholly owned brewing subsidiaries into four operating divisions: Carling, O'Keefe, Brading, (three old family names) and Dow. CBL, John Labatt and Molson were thus the only significant competitors left in Ontario and Quebec after 1952.

E.P. Taylor also saw the opportunity to take advantage of national advertising to repeat CBL's Ontario development in the West, where there was a great number of breweries in the West, similar in structure to pre-merger Ontario. In 1948 CBL purchased shares in Western Breweries Ltd. of Winnipeg, a holding company, which had operating subsidiaries in Manitoba, Saskatchewan, and Vancouver. CBL also had interests in Brewers and Distillers of Vancouver, Ltd. of which Vancouver Breweries Ltd. was a wholly owned brewing subsidiary. Brewers and Distillers of Vancouver Ltd. gained control of Western Breweries Ltd. in 1950 and through this takeover the company was renamed Western Canada Breweries Ltd. In addition to the combination of the Vancouver and the Winnipeg Companies that formed WCB, it gained control of two other companies. WCB purchased all the shares of Grantor Ltd. which in turn had purchased all the shares of Grant's Brewery Ltd. of Winnipeg. A second company, Torcan Investments, of which Taylor and two others were directors, acquired control of Red Deer Brewing Company Ltd. in 1953.

During 1957, most local brands of beer were phased out in order that the national brands could be produced in the West. This production would alleviate the high costs of transporting CBL beer west. In addition to plant acquisition, CBL acquired some hotels in Manitoba which was the only province which allowed "tied houses" and it was in these hotels that 90% of draft and 57% of bottled beers were sold.[8]

John Labatt Ltd.

John Labatt Ltd. was a family-owned operation until the end of World War II when public stock was issued. In 1953, Labatt decided to become a national brewer. The first expansion site, in Montreal, remains the largest. The company did not initially add to its size through acquisition. Before 1960, 50% of the company's total capacity was obtained through acquisition but today only 30% is the result of acquisition.

The following chronology documents Labatt's post-war expansion:

1946 Copeland Brewing Co. Ltd. in Toronto was purchased for $625,000. This had been the key acquisition that CBL sought, in order to apply pressure to Labatt for a quota system.

1953 Shea's Winnipeg Brewery Ltd. was acquired.

1954 A new brewery was built in Montreal and named La Brasserie Labatt Limitée.

1955 Labatt expanded the Montreal plant by 18% to 1.62 million barrels/yr.

1958 Labatt made a cash offer that was accepted for Lucky Lager Breweries Ltd. of Vancouver which raised its total capacity 20% to 2.03 million barrels/yr.

1960 The company leased Saskatoon Brewing Co. Ltd. with an option to purchase. Labatt's operations thus extended to the five provinces that accounted for 90% of total beer sales.

1962 Bavarian Brewing Ltd. in Newfoundland was acquired with a capacity of 130,000 barrels/yr. This increased Labatt's total capacity to 2.6 million barrels/yr.

1964 Labatt became a holding company - Labatt Breweries of Canada Ltd. - for subsidiaries carrying out brewing operations in Canada. Labatt also made an agreement with CBL, and Dominion Breweries to develop and market a continuous fermentation method of producing beer.

1966 Labatt obtained the right to brew and market the Guinness label for Canada. Labatt also expanded further the Montreal plant. Labatt's total market share rose from 21.1% to 27% as a result of these decisions.

1968 The company expanded its breweries in London, Edmonton and Saskatoon. The Oland group of breweries in the Maritimes was acquired. Oland and Son Ltd. in Halifax, N.S., and Olands Brewery Ltd. in St. John, N.B. were acquired adding 400,000 barrels of annual capacity to the existing 5,000,000 barrels.

1973 Labatt was clearly emerging as the dominant force in the industry, all of which was accomplished in the space of 20 years in an industry whose per capita sales were either stable or increasing slightly and where additional industry volume came only from population growth.

1974 Labatt acquired a Newfoundland plant with 50,000 barrel capacity; expansion was undertaken immediately. Annual capacity of Labatt rose to 6,950,000 barrels: 1,920,000 acquired, and 5,030,000 built. Columbia Brewing Company Ltd. with a brewery at Creston, B.C. (capacity of 225,000 barrels/year) and 8 distribution centers was acquired. The Department of Regional Economic Expansion (DREE) financed 10% of the cost.

1981 The Victoria brewery is closed. The Newfoundland Brewery is also closed.

Molson

Molson's Brewery Ltd. was incorporated on December 3, 1930 although the actual brewing business had existed since 1786. Molson's main concern preceding 1967 was brewing, and any acquisition during this period was strictly beer related. During the 1960's the company began to diversify and its name changed in 1972 to reflect this new strategy: the Molson Companies Ltd.

Molson expanded its operation in 1955, and built a new plant in Toronto. In the period 1941-1951 the province of Quebec experienced a major growth in population and with that, a major growth in beer consumption. During this time, Molson's extended its sales into all ten Canadian provinces. To satisfy this increase in demand Molson expanded its Montreal plant from 854,571 barrels/yr. in 1948 to 1,250,000 barrels in 1950.[9] Increased demand provided the profitability necessary for the expansion into Toronto with the initial Toronto plant having a production capacity of 200,000 barrels per annum.

In 1958 Molson acquired control of Sick's Breweries in B.C., Alta., and Sask. In 1960 Molson's bought all the shares in the Fort Garry Brewery Ltd. of Winnipeg. By March 1962 Molson's acquired all shares of Newfoundland Brewery Ltd.[10]

As a result of these expansions and acquisitions, by 1976 Molson operated 10 breweries in seven provinces (capacity in barrels/yr. in parentheses): St. John's, Newfoundland (150,000); Montreal, Quebec (2,220,000); Toronto, Ontario (2,200,000); Barrie, Ontario (700,000); Winnipeg, Manitoba (220,000); Regina, Saskatchewan (160,000; Prince Albert, Saskatchewan (200,000); Lethbridge, Alberta (450,000); Edmonton, Alberta (150,000); and Vancouver, B.C. (500,000), totaling 6,930,000 barrels annual capacity with 28 brands (regional and national).[11] Expansion in the later 1970's raised capacity of the Vancouver brewery to just under 800,000 barrels.

A Brief History of Regulation in the Brewing Industry

Both the federal and provincial governments regulate brewing, though over time provincial control has become more important. A judgment of the Judicial Committee of the Imperial Privy Council in London, England in May 1896 made the regulation of retailing and distributing alcohol a provincial concern; therefore regulations vary by province. The federal government's regulations apply to the production operations of breweries. Decisions by the Privy Council in

1900 also extended provincial jurisdiction to licensing of shops and taverns, and to licensing of brewers and distillers (although the Dominion licensed the brewers and distillers as well). The Dominion had jurisdiction over the Canada Temperance Act which was implemented in 1919 and which prohibited the manufacture and importation of liquors containing more than 2 1/2% of proof spirits. Further restrictions were invoked by "The Wartime Alcoholic Beverages Order" that prohibited the advertising of spirits, wine and beer, and limited their importation and sale (rescinded in 1944). In 1947 the control of alcoholic advertising reverted to the Provincial government. The Board of Broadcast Governors was established by the Broadcasting Act of 1958, returning control to the federal government.

The province of B.C. repealed prohibition in 1921 when governmental control of liquor sales was adopted and the Government Liquor Act was passed. The Liquor Control Board was responsible for the Act's administration. In 1923 the Act was amended to allow licensed establishments to sell beer for consumption on their premises. Differentiation of drinking establishments was made by legislation under the Government Liquor Act in 1953 and continues to the present day. Currently, beer is sold for off-premise consumption only through Government Liquor Stores, licensees and a variety of clubs.

Beer is an intoxicant and as a result is subject to both federal and provincial regulation. The Federal legislation consists of (1) The Broadcasting Act (discussed previously); (2) the Food and Drug Act, which prescribes alcohol content; (3) Importation of Intoxicating Liquors Act, which controls imports; (4) Canada Temperance Act, which provides local options; (5) The Excise Act, which has regulatory and revenue power.

Provincial legislation is concerned primarily with retail distribution, providing for: (1) licensing for brewers to sell wholesale, and for licensees to sell retail, to consumers; (2) conditions under which beer may be kept, consumed and sold; (3) advertising; (4) provincial taxes; (5) importing; (6) retail prices; and (7) enforcement of legislation. The four western provinces have had a history of more stringent controls placed on the brewing industry than their eastern counterparts. All beer is sold to a provincial liquor control board in these provinces, while this is not the case in Quebec and Ontario.

The prices of beer were generally regulated by the approved provincial body across Canada. In Ontario in 1950 the Liquor Control Board made it clear that approved prices were merely the maximum prices. This changed the 1935 "Code of Ethics" that was drawn up by E.P. Taylor. The price was set through Brewers' Warehousing Company Ltd., approved by the Liquor Control Board of Ontario and was viewed as fixed, and to be maintained. These fixed prices were believed to "enable the Labatt Company to set a standard of extremely high and wasteful expenditure on sales promotion ..."[12] In contrast, the Western Provinces appeared to control prices more closely than in Ontario and thus there was less opportunity for manufacturers to control the level of prices in these provinces.

Independent Breweries in Canada

Five independent brewers supply the remaining 3% of the Canadian beer industry. These companies are: (1) Moosehead Breweries Ltd., Saint John, N.B.; (2) Amstel Brewery Canada Ltd., Toronto, Ontario; (3) Northern Breweries Ltd., Sault Ste. Marie, Ontario; (4) Rocky Mountain

Breweries, Red Deer, Alta.; and (5) Old Fort Brewing Co. Ltd., Prince George, B.C.

Moosehead Breweries

George Oland bought a brewery in St. John in 1928. The established New Brunswick Breweries became Moosehead Breweries in 1947. Philip Oland, the grandson of George, is the present owner and president. The company maintains approximately 45% of the local market in the Maritimes. The other Oland brewery in Halifax was sold to Labatt in 1971. The Moosehead Breweries have achieved great success in developing its export market to the U.S., which now comprises thirty percent of its capacity. The company has a branch plant in Dartmouth, N.S..

Amstel

Amstel Brewing Holding Ltd. is part of the Heineken group based in the Netherlands, which bought Henninger Brewery in August, 1981. The present strategy of Amstel leans towards discount beer, Hamilton Mountain beer for the Canadian market, and toward promoting Amstel as a super-premium to compete with high priced imported beers.

Northern Breweries Ltd., Sault Ste Marie

Northern Breweries Limited is largely confined to marketing beer in Northern Ontario north of Barrie. Its limited capacity and small volume have precluded sorties into larger markets.

Rocky Mountain Breweries

Uncle Ben's Brewery started in 1972 was bought by Steeplejack Services Ltd. of Calgary in December 1981 for $6 million. Rocky Mountain Brewery produces Gold Peak Premium Lager and Trapper Malt Liquor which it exports to the States under the name Trapper Canadian Lager. The beer has met with good market acceptance, and sales exceed plant capacity.

Old Fort

Caribou Brewery built a plant in Prince George, B.C. in 1954. This brewery has since that time changed owners numerous times. For example, Ben Ginter bought the brewery in the 1960's and attracted much attention with flamboyant marketing programmes. He then sold the brewery to Nelson Skalbania. Old Fort bought the plant in June 1981. Old Ford invested $2 million in capital improvements in the plant raising its capacity to the present 220,000 barrels/year from the original 140,000 barrels/year. The only brand that was being produced when the plant was purchased was Pacific Gold; Yukon Gold is its major export. Old Fort subsequently added two brands Iron Horse and Old Fort. The estimated B.C. market share is approximately 1%. The present production rate hovers around forty percent of capacity. The company exports to thirty-two states in the United States, with California being the strongest market.

Taxes

The Federal and Provincial governments resort to quite different methods for taxing the brewing industry. The federal government relies on two methods: (1) excise duties and (2) sales tax. Excise duty of one cent a pound began in 1867 and by World War II reached six cents per pound of malt used. In 1954 the method of levying the excise duty was changed at which time it had reached twenty-one cents per pound. The method of taxing malt was replaced by a straight duty of thirty-eight cents a gallon because improved methods resulted in a decrease in the amount of malt used. In 1962 the excise tax was raised to forty-two cents per gallon. Additionally, the excise tax is indexed to an average of price for alcoholic beverages resulting in an effective excise tax of seventy cents per gallon as of 1 September 1982.

A sales tax was introduced in 1920. Initially, it was one percent on sales by wholesalers and two percent on those by retailers. Both these sales taxes rose and reached a peak of six percent on sales by wholesalers and five percent on sales by manufacturers. Originally with the advent of taxation in 1930, only the manufacturers were taxed beginning at a low of one percent in 1930 and rising steadily to reach its present level of twelve percent.[13] The excise duties are assessed at the end of the packaging stage.

At the provincial level there is enormous diversity in the methods of beer taxation. The provincial governments through their various liquor boards gain revenue through the mark-up on beer sold and through licence fees. The provinces with sales taxes also realize further revenue here by applying sales taxes on top of previously marked up beer prices though draft beer in B.C. sold to licensees is exempt from sales tax. There have been substantial differences in both beer prices and the provincial share of that price which are discussed in detail later in Chapter 8.

Footnotes to Chapter 2

[1] Dominion Brewers Association, *Facts on the Brewing Industry in Canada*, (Ottawa: Dominion Brewers Association), 1948, p.

[2] *Ibid.*, pp. 6-8.

[3] Nicholas Hunter, *Globe and Mail*, May 31, 1982, p. B2.

[4] R.T.P.C. *Report Concerning an Alleged Combine in the Manufacture, Distribution and Sale of Beer in Canada*, (Ottawa: 1955), p. 16.

[5] J. C. H. Jones, "Competition in the Canadian Beer Industry" (Ph.D. dissertation, Queen's University, 1965), p. 61.

[6] R.T.P.C., p. 20.

[7] Jones, Table 13, p. 79.

[8] *Ibid.*, p. 70.

[9] Merrill Denison, *The Barley and the Stream: The Molson Story*, (Toronto: McClelland and Stewart Ltd., 1955), p. 381.

[10] Canada, Royal Commission on Corporate Concentration, *Study No. 8 The Molson Companies Limited*, (Ottawa: Minister of Supply and Services, 1976), Appendix 6, p. 49.

[11] *Ibid.*, p. 63.

[12] R.T.P.C., p. 83.

[13] Brewers Association of Canada, *Brewing in Canada*, (Ottawa: Brewers Association of Canada, 1965), p. 78.

Chapter 3

Brewing and Packaging Beer: An Overview of the Production Process

Brewing is a very old process, long regarded as an art. Archaeological evidence supports the notion that beer may have predated bread, so old is man's use of the process.[1] Although the basic process remains unchanged, since World War II brewing has evolved into a science practiced by the world's major breweries.

Beer is made from four principal inputs:[2]

1. Malt (made from barley which has been allowed to germinate and is then dried), provides needed enzymes to turn starches into sugars;
2. Adjuncts, including hops, corn, rice or corn syrup, provide both flavouring and a source of starch which the malt enzymes can then convert to sugars for fermentation;
3. Yeast ferments the sugars to produce alcohol and carbon dioxide gas;
4. Water acts as both a solvent and medium for the fermentation process.

Variations in the types and quantities of these four ingredients lead to the distinctly different flavours that characterize beers, ales, porters and stouts around the world. The development of special strains of yeast, the use of varying quantities and qualities of adjuncts and malts, and of course differences in water quality all go into the brewer's art and science, allowing brewers to evolve the unique tastes associated with different brands, the recipes for which are closely held industrial secrets.

Independent of the specific recipe, however, the basic process is the same for all brewing, though cottage brewing, recently introduced in British Columbia, omits some elements of large-scale industrial brewing. Figure 3-1, reproduced with permission of the Brewers Association of Canada, sets out the basic process. It provides a succinct summary of the brewing process and enables a quick overview of major steps in the production and packaging of beer.[3]

For convenience, Figure 1 shows the brewing and packaging process, comprising five relatively distinct phases beginning with the preparation of malt and culminating with the bottling and kegging of the finished product. We discuss each in turn briefly.

Phase 1

The malting and malt preparation process constitute Phase 1. Malt is prepared from barley which has been allowed to germinate slightly and then is kiln dried to stop the germination process. Germination allows the development of enzymes in the barley which will then break down the starch cells from the barley and the adjuncts. The malted barley is then shipped to the breweries where it is screened and crushed in preparation for cooking with the other starch sources (adjuncts such as rice or corn).

Phase 2

Brewing commences in this phase with the cooking of the malt and the adjuncts in the "Mash Mixer" as shown on the figure. In this mashing process the malt enzymes break down the starches in the barley and the adjuncts to create sugars which can later be fermented into beer (in Phase 3). The barley proteins are also broken down in "mashing" into simple nitrogen compounds. The mash is next transferred to the "lauter tun" ("lauter" is a German word which

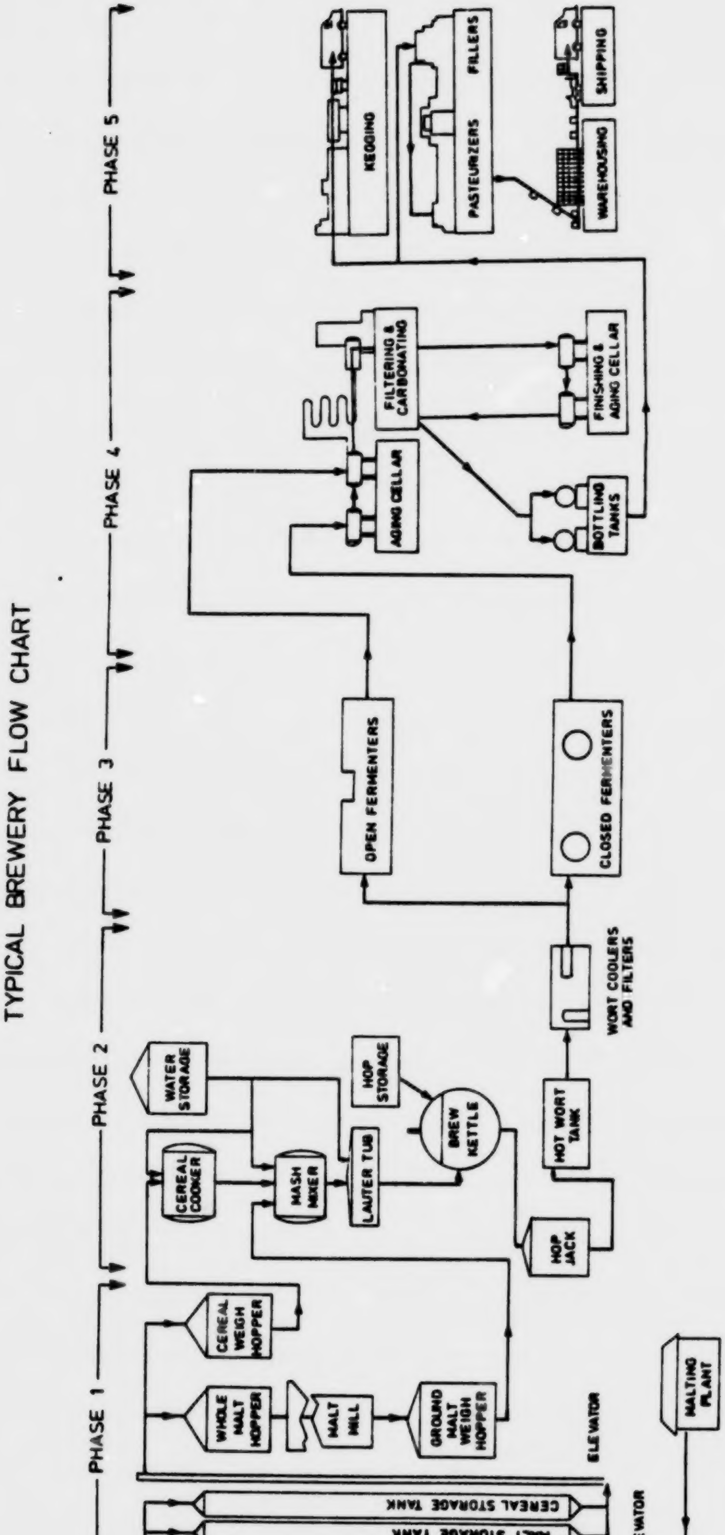


Figure 3-1: Typical Brewery Flow Chart

means "clarifying") or "clarifying vessel". In the lautering process the extract of the mashing process is drained off through slotted panels in the bottom of the lauter tun. The remaining mash is then rinsed or "sparged" with hot water to get out residual extract from the mash. The spent grains are sold as a high protein animal feed (much in demand from brewers), while the extract containing the sugars and proteins, now called "wort", is ready for mixing with hops, adding much of the distinctive flavour of different beers. In the brew kettle the hops and the wort boil for up to 2 hours in vessels as large as 100,000 litres. The boiling concentrates the wort solution and the hopping adds the flavouring characteristics desired by the individual brew-master. The flavour is further defined in the fermenting and aging processes of Phases 3 and 4.

After the brewing and hopping process the wort is drawn off into a "hop jack" where it is separated both from the hops and from the remaining precipitated protein. The wort then rests in the "hot wort tank" where the last of the precipitated proteins are allowed to settle out of the wort before it is sent on to the wort cooler and filters to ready it for fermentation.

Phase 3

It is here in Phase 3 that the most delicate and important part of the process of brewing beer occurs. The wort is transferred to fermentation tanks where yeast is added. The yeast are specially bred and controlled by each of the major breweries, and differences among yeast cultures provide substantial differences in taste. The process by which the sugars are converted to alcohol and carbon dioxide gas is at the heart of the brewer's craft, and breweries jealously guard their yeast cultures and their techniques for improving and protecting these essential cultures.

Two different kinds of yeast are used in brewing: one for producing ales (so-called "top" yeast since it rises to the top of the brew during fermentation); and one for lagers ("bottom" yeast which settles to the bottom of the fermenters during fermentation so that the beer can be drawn off the top of the fermenters and the yeast can be recovered for future brews). Fermentation typically lasts seven days, after which the beer/ale is separated from the yeast and moved along to the fourth phase of the brewing and packaging process.

Phase 4

After fermenting for a week the beer/ale is moved to storage tanks for maturing and aging. The beer is cooled to 0°C for from one to three weeks. It is then filtered and recooled to 0°C, and moved to secondary storage for another ten to fourteen days. At the end of this secondary storage period the beer is put through its final "polishing" filter and placed in tanks from which it can be packaged into either bottles, cans or kegs.

Phase 5

Beer to be sold as draught goes directly into kegs for delivery to outlets which are licensed to sell draught beer. Draught beer in kegs has to be treated carefully as it is not pasteurized; it must be kept cool and served within several weeks of kegging or it will go stale. Bottled beer on the other hand is pasteurized to kill any remaining yeast or bacteria which would make the beer go stale. Bottled (and canned) beer has a longer shelf life, but still should be consumed within three to four months to retain its quality. The most elaborate and impressive part of the entire brewing and packaging process occurs here in the final stage of the process where shiny, complex machinery can fill and cap up to 1200 bottles per minute. High speed canning lines can work even faster, filling and sealing the cans at up to 2000 cans per minute. In British Columbia (and Canada more generally for that matter) another facet of Phase 5 is the cleaning of empty beer bottles. Empties carry a deposit and are recycled, unlike in the U.S., where virtually no recycling takes place and the bottling process is consequently far simpler.

As sketched above, the basic process is reasonably straightforward. Considerable complexity can be found with every stage, however, given the extensive capital investment and technological advances in the brewing process.

To put the entire process into perspective, the largest time-component of brewing is the fermentation and the aging of the beer. However, the most costly phase is the last, where the product is packaged into bottles, cans and kegs. This is the result of both the large labour component and the costly high speed equipment that is needed in the packaging phase. We will review the costs associated with brewing in some detail in a later section, and this review of the production process provides us with a basis for understanding where cost savings can be realized.

Footnotes to Chapter 3

1. Brewers Association of Canada, Brewing in Canada, (Ottawa, Ontario: Brewers Association of Canada), 1965, p. 1. Also see pages 2-5 for additional interesting history about beer and brewing.

2. For a good overview of brewing, as well as more elaborate technical detail see: J. S. Hough, D. E. Briggs, and R. Stevens, Malting and Brewing Science, (London, England: Chapman and Hall), 1971. For a more general description see Brewing in Canada cited above, pages 26-37 (Chapter IV), from which the present discussion is largely taken.

3. See Brewing in Canada, op.cit., pp. 29-34. Also see James Keddie and William Cleghorn, Brewing in Developing Countries, (Edinburgh, Scotland: Scottish Academic Press), 1979 for an excellent description of the fundamentals of brewing and bottling that is less technical than Hough, *et al*.

Chapter 4

Distributing Beer in British Columbia

Introduction

The distribution of most consumer products is relatively straightforward; it involves moving the product from the producer to the jobber/wholesaler to the retailer to the customer, the so-called "three tier system". Some products might require additional steps, but the basic structure is normally very simple. The distribution of brewery products in British Columbia is considerably more involved, as we will see. This complexity is due to the regulatory environment within which the industry functions, to historical practices, and to the economics of brewing and distribution. In the following discussion we will examine the distribution of both domestic and imported beer, at both the wholesale and retail levels. The final section of the chapter contains a brief look at the systems employed in other provinces, some of which have been suggested for use in British Columbia.

Wholesale Distribution System: From the Brewery to the Retailer (and Back Again for Empty Bottles)

Figure 4-1 sets out schematically the British Columbia beer distribution system, including the return of empty beer bottles and cans. The intricacy of the diagram reflects the complexity of the distribution system. The sections of the diagram will be discussed in turn, beginning at the top of the diagram.

To begin, there are two separate wholesale distribution networks in the province. Pacific Brewers Distributors Ltd. (PBD), the larger of the two, is a beer distribution company owned entirely by the three national breweries: Molson, Labatt, and Carling-O'Keefe. These national brewery companies have four breweries in British Columbia: Molson's plant in Vancouver; Carling-O'Keefe's

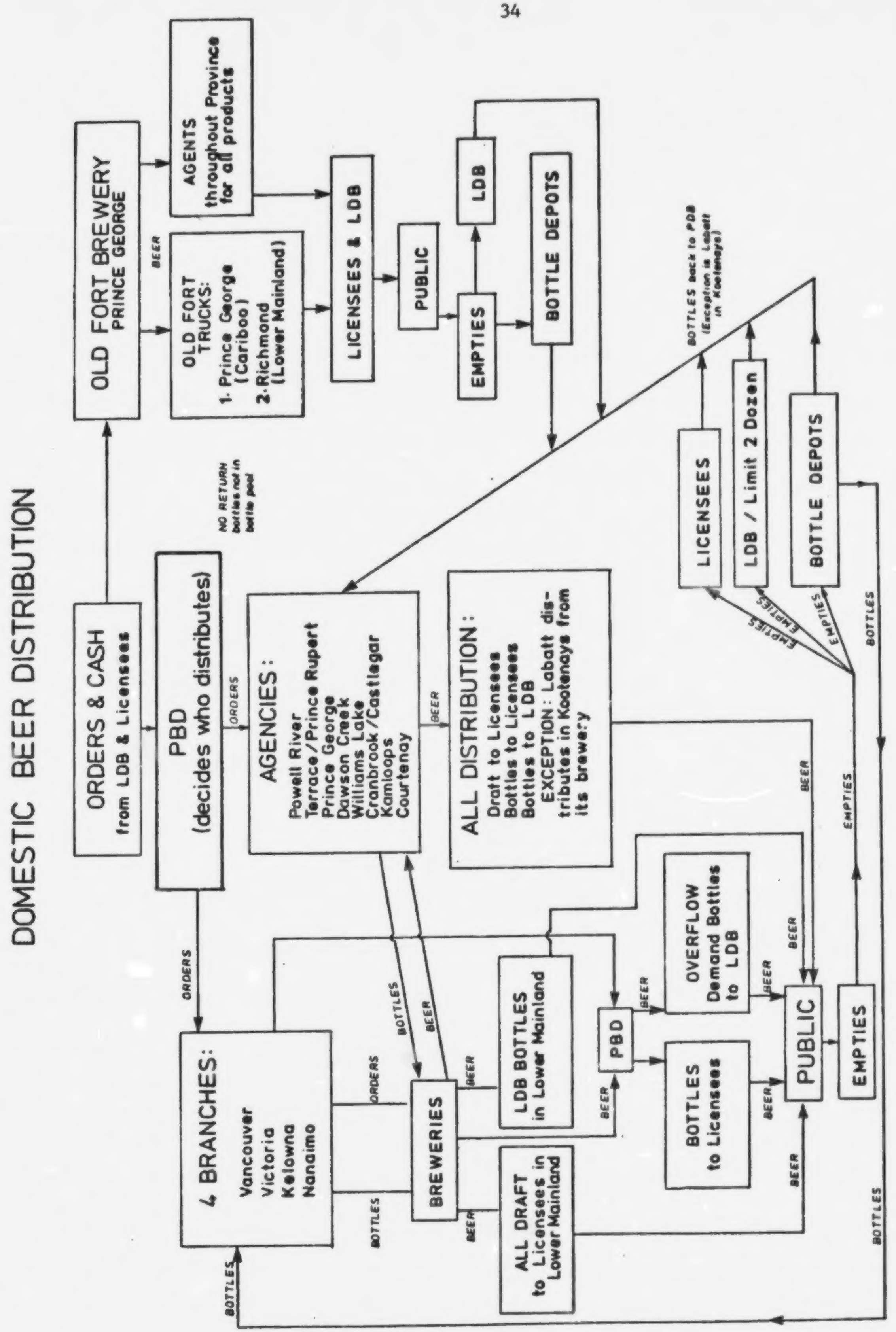

DOMESTIC BEER DISTRIBUTION
ORDERS & CASH from LDB & Licensees
OLD FORT BREWERY PRINCE GEORGE
BEER
AGENTS throughout Province for all products
OLD FORT TRUCKS: 1. Prince George (Cariboo) 2. Richmond (Lower Mainland)
LICENSEES & LDB
PUBLIC
EMPTIES
LDB
BOTTLE DEPOTS
NO RETURN bottles not in bottle pool
PBD (decides who distributes)
ORDERS
AGENCIES: Powell River Terrace / Prince Rupert Prince George Dawson Creek Williams Lake Cranbrook / Castlegar Kamloops Courtenay
BEER
ALL DISTRIBUTION: Draft to Licensees Bottles to Licensees Bottles to LDB EXCEPTION: Labatt distributes in Kootenays from its brewery
BOTTLES back to PBD (Exception is Labatt in Kootenays)
LICENSEES
LDB / Limit 2 Dozen
BOTTLE DEPOTS
EMPTIES
EMPTIES
EMPTIES
BOTTLES
BEER
EMPTIES
ORDERS
4 BRANCHES: Vancouver Victoria Kelowna Nanaimo
ORDERS
BOTTLES
BREWERIES
BOTTLES
BEER
BEER
LDB BOTTLES in Lower Mainland
BEER
ALL DRAFT to Licensees in Lower Mainland
BEER
PBD
BEER
OVERFLOW Demand Bottles to LDB
BOTTLES to Licensees
BEER
BEER
BEER
BEER
PUBLIC
EMPTIES
BEER
BOTTLES
BOTTLES

Figure 4-1: Domestic Beer Distribution

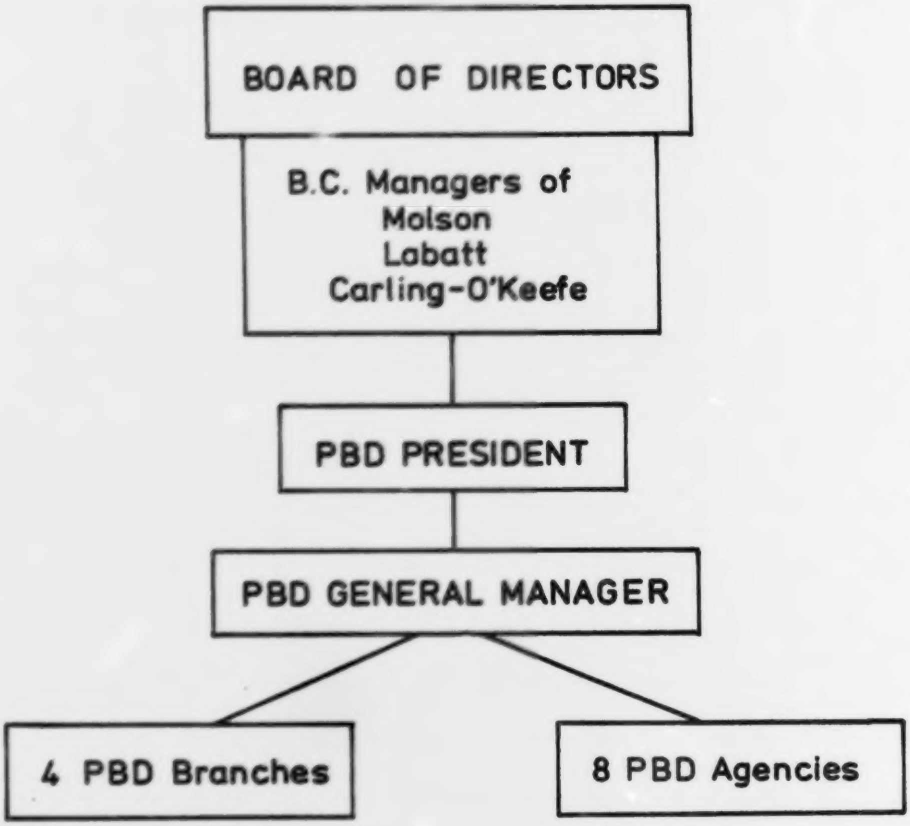
in Vancouver, and Labatt's in New Westminster and Creston. (Labatt's has recently closed its brewery in Victoria.) These three brewers distribute their product in several ways. First, working down through figure 4-1, the breweries distribute all draft beer in the lower mainland using their own fleets. They also deliver bottles and cans to LDB stores, as truck capacity is available, though they do not pick up empty bottles. Labatt's also uses its own fleet for distribution on Vancouver Island and in the Kootenays (they operate a brewery in the Kootenays and operated one in Victoria until 1981). PBD distributes the remaining supplies to the Liquor Distribution Branch (LDB) stores, as well as delivering bottled beer to larger licensees (hotels, pubs, restaurants, clubs, etc.). Outside the lower mainland PBD delivers all beer to both licensees and to the LDB with the exception of Labatt's as noted previously.

PBD thus provides the vast bulk of the distribution system through four branches in Victoria, Vancouver, Kelowna and Nanaimo, and through a series of agents in eight other locations in the province (see Figure 4-1 for listing of PBD agency locations). PBD processes all beer orders either through its branches or through its agents. It also takes payment for all orders except those from the LDB, which has a somewhat different system for settlement of payment with the breweries. With the order and the payment in hand PBD then determines who will deliver the product, the breweries or PBD, depending upon the location of the buyer and the product (draft or bottles/cans).

Since PBD plays such a central role in the distribution of beer in British Columbia, an overview of its structure and operation is in order. Figure 4-2 sets out the PBD organizational structure. The Board of Directors is comprised of the heads of the three national breweries in British Columbia. The President rotates annually and is chosen from the three board members. The General Manager of PBD is responsible for the day-to-day operation of the company. PBD is wholly owned by the three breweries and makes no profit, redistributing to its three owners any residual at the end of each fiscal year (March 31). The costs of distributing beer are borne by the breweries and are charged back to them by PBD based on each brewery's PBD throughput. Administrative costs of running PBD (as distinct from actual distribution charges) are prorated to each brewer on the basis of current market share in British Columbia.

The second distribution system operating in the province is run by the only independent commercial brewer (excluding the "cottage" brewery in Horseshoe Bay, discussed below): Old Fort Brewing Co. of Prince George. Old Fort has truck fleets in Prince George for servicing the Cariboo, and in Richmond for servicing the lower mainland. Orders from other parts of the province are taken and delievered by Old Fort agents. The two systems are very similar, with Old Fort providing for itself the coordinating function supplied by PBD for the three major breweries. In all instances payment is made at the time the order is placed, again except for the LDB orders, and the brewers either supply product directly to LDB stores, to licensees, or to PBD (for the three nationals) or distribution agents (for Old Fort). For LDB orders, 95 percent of the value of a week's deliveries is paid to PBD or the agents three weeks thereafter with the remaining five percent paid upon verification of deliveries.

The reason for Old Fort's decision not to participate in the PBD network requires some explanation. All PBD employees (save management) are members of the Brewery, Winery and Distillery Workers Union, Local 300 (the same union as all brewery workers in British Columbia). The three national breweries have common wages in their separate union contracts which includes PBD. These contracts all expire at the same time. Old Fort, however, has a separate union contract reflecting its higher costs and more remote location. As a result, Old Fort has found it advantageous not to join PBD either as a full or associated



PACIFIC BREWERS DISTRIBUTORS LTD.
ORGANIZATIONAL STRUCTURE

Figure 4-2: Pacific Brewers Distributors Ltd. Organizational Structure

member since PBD membership would expose Old Fort's distribution system to additional potential disruption by labour disturbances. Old Fort as a result does not have the benefit of either the portion of the provincial beer bottle pool administered by PBD or the pallett pool (wooden palletts upon which beer is loaded and unloaded). These disadvantages apparently are offset by the advantages of a separate union contract, justifying parallel beer distribution systems at the wholesale level.

Imported Beer: An Additional Wrinkle in the System

The importation and distribution of beer from outside Canada is considerably simpler than the process just described. It closely approximates the usual relationship between a retailer (the LDB), middlemen (local agents and warehousing), and producers and suppliers abroad. The system is set out in Figure 4-3. When the LDB requires imported beer, it places an order with the supplier's local agent. Since, under the federal Importation of Intoxicating Liquors Act, only provinces or their appointed provincial liquor boards can import alcoholic beverages, LDB becomes the importer of record and issues a purchase order allowing local agents to bring in foreign beer on behalf of LDB. Local agents then warehouse the imported beer and pay all freight, storage and associated importing costs, including the price of beer itself. When LDB needs the imported beer it issues a "release purchase order" which allows the beer to be shipped to the LDB warehouse. In this way LDB does not tax its warehousing facilities, yet does allow for the importation and efficient supply of imported beer through independent local agents for foreign breweries and foreign agents for these breweries. The public and licensees in turn purchase the foreign beer from the LDB, either through the local LDB liquor stores, or directly from the LDB "licensee stores" for larger licensees.

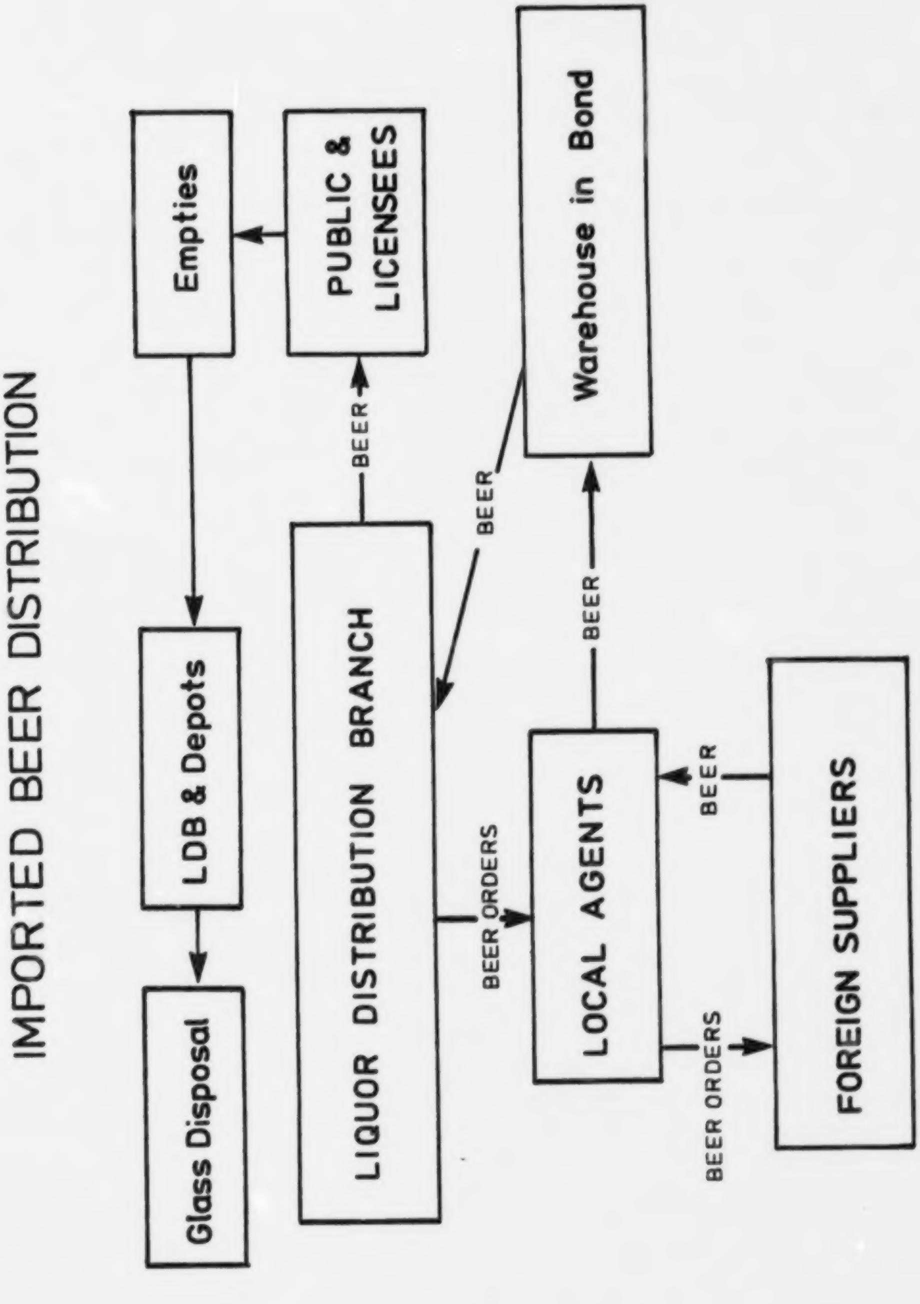


Figure 4-3: Imported Beer Distribution

Retailing of Beer in British Columbia and the Return of Empty Bottles and Cans

From Figures 4-1 and 4-3 we see that the final stages of the distribution system involve the consumer, who can buy packaged beer only from LDB stores at LDB prices, or from licensees who can add $1.60 per dozen over and above the LDB price. Consumers can also purchase for on premise consumption draft beer from the 681 licensees authorized to carry it (pubs and hotels essentially). Accordingly, the retailing of beer is restricted to some 216 LDB stores and 80 LDB agency stores, to roughly 750 licensees across the province who can sell for off-premise consumption, and to roughly 5000 licensees in total who can sell beer for on premise consumption.

The final element in the distribution system is the return of empty bottles and cans, which carry a deposit of $1.20 per dozen for bottles and 60¢ per dozen for cans. Domestic beer comes in the standard "stubby brown bottle". These bottles are recycled roughly 25 times each before they are crushed to be sold back to glass factories or sent to dumps. Cans in use in British Columbia are steel-walled aluminum-top with litter-proof opening devices. They are not readily recycled because of their mixture of steel and aluminum, and are crushed for scrap. (Note that this differs from the single-extrusion all aluminum can in use in the U.S., which is readily recycled for resmelting). Imported beer bottles are also crushed and sold to glass factories, sent to dumps, or returned to the breweries, as these bottles cannot be reused in British Columbia and it is generally uneconomic to ship them back to the foreign brewery for reuse. Some bottles from some Washington State breweries are returned to the brewery for reuse. LDB stores will accept up up to 2 dozen empties per person at one time in most stores, though some larger specialty stores, such as the flagship store at Cambie and W. 39th Ave., will take back unlimited empties. Licensees who sell packaged beer for off-premise consumption are also required to take back limited quantities of empties though they seldom do so in practice. Private bottle depots, however, will take back unlimited quantities of empties, usually at a discount of up to twenty cents per dozen to cover their operation cost. The domestic empties from the LDB, licensees, and bottle depots are picked up by PBD and recycled to the breweries as they are required, where they are washed, checked for flaws and then refilled.

Some Alternative Distribution Systems

The British Columbia model is approximately the same as in Alberta, Saskatchewan, Manitoba and the Atlantic Provinces. The principal innovations relate to the retail distribution system, the focus of this short review. The relevance of these alternatives for British Columbia is evaluated in a later section of the report.

The most elaborate distribution network currently in use is the Brewers Warehouse and Brewers Retail system in Ontario. Here the breweries jointly own a wholesale and retail distribution company that provides for the distribution of all domestic beer (i.e., that produced within the province of Ontario). Each Brewers Retail outlet accepts unlimited empties and stocks all domestic brands. Beer is available from the roughly 500 Brewers Retail outlets, plus another 500 Liquor Control Board of Ontario stores in limited quantities. (LCBO stores stock one brand from each brewer except in remote locations not served by Brewers Retail.) The Brewers Retail system is highly efficient, with temperature and inventory controlled to ensure quality. Their well-designed outlets distribute beer and accept empties at relatively low cost around the province, and appear to serve the public well.

At the other extreme is the Quebec system wherein imported beer is sold by the usual provincial liquor outlets (Societ des Alcools), and domestic beer is sold by small grocery stores. This system provides added convenience through the widespread availability of beer, but at some added cost both to the province and the consumer. The province accepts lower taxes to partially offset the higher distribution costs of servicing large numbers of small stores, but the retail price of beer is still somewhat higher than in Ontario. Beer is dated to ensure that the public is aware of its freshness, an important consideration in the distribution of a product with a limited (3-4 month) shelf life.

Manitoba, while following the B.C. model for the most part, has also allowed hotels to sell beer on a large scale. Manitoba hotels sell cold beer, offer a complete range of beer brands, and also accept unlimited empty bottle returns but do not make full refund on the deposit. The hotel system seems to work efficiently and provides the public with an expanded number of outlets plus the possibility of obtaining cold beer. Hotel sales account for approximately 85% of packaged beer sold in Manitoba.

No discussion of alternatives would be complete without brief mention of the U.S. system. The U.S. system is the classic distribution network discussed in marketing text with producers, jobbers/distributors, wholesalers, retailers and consumers, and involves an enormous array of retail outlets ranging from state liquor stores to private liquor stores to supermarkets and grocery stores. In most states, the typical retail outlets for beer are grocery stores and supermarkets. The U.S. system has far less state regulation than in place in any Canadian province. The U.S. market model for beer is one typified by relatively little direct government regulation, except for federal and state taxation. All provinces have strict requirements for distributing beer, and, at the very most, allow beer sales through small groceries only, as in Quebec.

Thus the U.S. system, while it may involve higher distribution costs, provides the highest level of convenience for the consumer, and the least amount of control by the government. Correspondingly, the U.S. system generates much less direct revenue for the state governments compared with direct revenues received by provincial governments in Canada from our systems.

APPENDIX: CHAPTER 4

Table 4A-1

Provincial Distribution Systems

Province	Brewer must sell to Liquor Commission (except draft, see Column 9)	Distributed by:	Do brewers use brewer's retail stores (% of total hl)?	Do brewers use brewer's agents or wholesalers[e] (% of total hl)?	Bottles picked up by:	Does Liquor Commission[f] sell to consumers (% of total hl sold)	Are warehouses government-owned	Are some outlets licensed for both on- and off-premise consumption?	Draft beer delivered direct to licensees?	L.C. store equipped for bottle return?	Home delivery?	Freight on beer	Freight on returned bottles	Percent of hl sales sold through licencees
Newfoundland	Yes[a]	Local brewers and their distributors	Yes, one brewery (9%)	Yes	Distributors	Yes (6%)	No (distributors own all)	No	?	No bottles are returned to breweries	No	Paid by brewers when shipped outside of St. Johns	Paid by brewers	35.0
P.E.I.[h]	Yes	Brewers direct to stores or to LCC[g]	No	No	Local bottle dealers	Yes (74.3%)	Yes	No	Yes	No	n/a	Paid by brewers	Paid by local bottle dealers	25.0
Nova Scotia	Yes	Brewers to Commission stores and warehouses	No	No	Commission stores and bottle dealers	Yes (73.3%)	Yes (brewers also have warehouses)	No	Yes	Yes	n/a	Paid by brewers	Paid by brewers	26.7
New Brunswick	Yes	Brewers to government stores or warehouses	No (no licence issued)	Yes	Bottle dealers	Yes (72.2%)	Yes	No	Yes	No	n/a	Paid by brewers	Paid by brewers	27.8
Quebec	No	Breweries[i] (or wholesale agents outside of Montreal area)	No	Yes[b] (wholesalers pay freight)	All those to whom beer is delivered	Licence outlets only	No (brewer-owned)	Yes, hotels in communities where no grocery permits exist	Yes	No	Yes, by a grocery store permit only	Paid by 1) breweries when they deliver 2) country distributors when they deliver	Paid by brewers	31.9
Ontario	No	Brewers Warehousing Company Ltd.[d]	Yes[j] (on brewers premises) (0.5%)	Yes[c]	L.C.B.O., brewers, and Brewers Warehousing Co.	Yes (some government stores) (4.8%)	No (Brewers Warehousing Co.)	No	Yes	Yes	Yes	Breweries bear all costs	Brewers pay from breweries to store. LCBO pay from consumer to LCBO	25.5
Manitoba	Yes	Associated Brewery Distributors	No	Yes	Brewers	Yes (some government stores) (8.6%)	n/a	Yes	?	No	n/a	A.B.A. pays (where common carriers are used, brewers pay)	Breweries pay	91.4
Saskatchewan	Yes	Common carriers (on contract basis)	No	Yes	Saskatchewan Brewers Assoc., licensees, and bottle collectors	Yes (30.4%)	No (distributor-owned)	Yes	Yes	Yes	n/a	Brewers pay for freight to warehouse; LCB pays for freight to stores	Bottle returners pay freight on bottles. Brewers pay freight on kegs	69.6
Alberta	Yes	Alberta Brewers Agents Ltd.	Yes (on brewer's premises)	Yes	All outlets and independent depots	Yes (56.1%)	No (since 1973, distributor-owned)	Yes	Yes	Yes (some provincially operated depots)	n/a	Paid by Alberta Brewers Agents Ltd.	Paid by Alberta Brewers Agents Ltd.	43.9
B.C.	Yes	Brewers and/or Pacific Brewers Distributors Ltd.	No (operated by L.C.B.)	No	Pacific Brewers Distributors from liquor stores, licensees, and bottle dealers	Yes (52.6%)	Yes (also distributor-owned)	Yes	Yes	Yes	n/a	Brewers and/or distributors	Pacific Brewers Distributors Ltd. pay	4 .4
Yukon[h]	Yes	Brewers	No	No	Government warehouse	Yes (n/a)	Yes	Yes	No	Yes	n/a	n/a	Liquor Corp. responsible to ship to Pacific Brewers Dist.	n/a
Northwest Territories[h]	Yes	Brewers	No	No	No particular party	Yes (n/a)	Yes		No	No regular arrangement	n/a	n/a	No regular arrangement	n/a

Source: 1) Brewers Association of Canada, "Summary of Provincial Beer Sales and Distribution Methods", August, 1982.
2) Legislation Digest. (Note: where conflict occurred between sources, Legislative Digest was used)

Notes

- a If the beer is sold to another person, other than the Commission, the profit the Commission would have received must be sent to it by the brewer.
- b Independent agents move 31.7% of total hl sales; owned agents and branches 36.4%, and licensees 31.9%
- c These agents do not take title
- d This is owned by the breweries
- e Brewer's agents sell from liquor agency stores, warehouses and general stores (where Corporation store is not profitable) for private consumption
- f The Liquor Corporation is an agent of the Crown
- g LCC is the Liquor Control Commission
- h There are no breweries operating
- i Brewers own the delivery trucks
- j There are Brewer's Retail Stores that are owned and operated by the Brewer's Warehousing Company, and there are stores owned by the Brewers (situated on their premises)

n/a - not available

CHAPTER 5

Marketing Beer in British Columbia

Introduction and Definitions

A leading Canadian textbook in marketing defines the subject in the following terms:

> Marketing is defined as the development and efficient distribution of goods and services for chosen consumer segments. Profitability is achieved through creating customer satisfaction. Marketing activities begin with new product concepts and designs analysed and developed to meet specific unfilled consumer needs -- not with finished goods ready for shipment.[1]

These authors further observe that marketing decisions can be separated into four interrelated strategic components -- product strategy, pricing strategy, distribution or "place" strategy, and promotional strategy -- often referred to as the "four P's" of marketing strategy. Borrowing once more from this text, each of these components can be elaborated as follows:

> Product strategy includes decisions about the product and its uses, package design, branding, trademarks, warranties, guarantees, product life cycles, and new product development. The marketer's concept of product strategy involves more than just the physical product. It also considers the satisfaction of all consumer needs in relation to a good or service.
>
> Pricing strategy, one of the most difficult parts of marketing decision-making, deals with the methods of setting profitable an justified prices. Most prices are freely set in Canada. However some prices, such as those for public utilities, airlines, and some food products, are regulated and subject to public scrutiny.
>
> Distribution strategy involves the physical distribution of goods and the selection and management of marketing channels. Marketing channels are the steps or handling organization that a good or service goes through from producer to final consumer. Channel decision-making involves establishing and maintaining the institutional structure in marketing channels. This includes retailers, wholesalers, and other institutional middlemen.
>
> Promotional strategy involves personal selling, advertising, and sales promotion tools. The various aspects of promotional strategy must be blended together in order to communicate effectively with the marketplace.

> The total package forms the marketing mix -- the blending of the four strategy elements of marketing decision-making to satisfy chosen consumer segments. Each of the strategies is a variable in the mix. While that fourfold classification may be useful for the purpose of study and analysis, it is the total package (or mix) that determines the degree of marketing success.[2]

This four element strategic framework is a general approach to marketing analysis and is relevant for all goods and services. We shall apply it to the specific problem of marketing beer in British Columbia. The marketing of any product is a broadly-based procedure, and the use of this framework facilitates the examination of competitive behaviour, of which pricing is only one element, in a fuller context. Accordingly, let us now turn to a discussion of the marketing of beer in British Columbia using the four element marketing model.

The Product Strategy

Among the choices facing the brewers in British Columbia, the type of malt liquor (the generic term for beers, ales, porters, stouts, etc.) to be produced is paramount. The product mix in British Columbia is broad, ranging from ales, lagers and stouts, to lower calorie and lower alcohol light beers with less than four percent alcohol. Throughout North America, the trend away from heavier drinks, such as ales, to lagers and light beers has become pronounced in recent years, and British Columbia's brewers have adjusted their product mix to these changing tastes. New product development and innovation is important in a changing market and the introduction of light beers in British Columbia stands as a recent example of the adaptation of local breweries. Package design and innovation, another aspect of product strategy, is not readily open to Canadian brewers; the "stubby brown bottle" is the standard in British Columbia and elsewhere in Canada.

The Pricing Strategy

Beer pricing is a central issue, not just to brewers of malt liquor products, but to this study, and will be discussed in detail in a separate chapter. Price regulation by provincial liquor authorities across Canada will be discussed, and the complex procedure for changing beer prices in British Columbia will be explained. Within these constraints, pricing strategies open to brewers in this province will be explored. In the present context it is important to reiterate that pricing is only one of the four principal components of marketing strategy. It cannot be relied upon to work by itself in bringing about active and competitive marketing strategies; the entire range of strategic elements must be called upon.

The Distribution Strategy

As we saw in Chapter 4, the British Columbia beer distribution system is exceedingly complex, beginning with the breweries and importers and moving through Liquor Distribution Branch stores and licensees who sell beer to the public for on- and off-premise consumption. From the marketing strategist's perspective however, it is relatively simple. The enormous range of strategic distribution decisions that face brewers in the United States and Germany for example is largely absent in British Columbia, since breweries can only sell to the LDB and through the LDB to licensees. The brewers need not determine retailer strategies nor devise new outlets for their product, since these are under the purview of the government of British Columbia. Thus the brewers of British Columbia do not have to worry about opening up new "distribution channels"; they are not allowed to do so under current regulation, with the minor exception of opening "brewery stores" at the five breweries in the province. The distribution strategy therefore revolves around how and who will distribute beer to permitted outlets, and the systems discussed in Chapter 4 have evolved to meet the distribution needs of the breweries.

The Promotional Strategy

Promotional strategy is the aspect of marketing most familiar to the public, since it involves media advertising. Until October, 1982, B.C. breweries were confined to use of print media for their advertising and promotional campaigns. However, since that time the breweries have been given restricted permission to promote their products via radio and television. Under present regulations they may not encourage the consumption of alcoholic beverages nor employ lifestyle advertising in their campaigns. (Lifestyle advertising associates beer drinking with, to borrow from the Morrow Commission Report of 1970, "social prestige, business success, popularity with the opposite sex, or escape from personal problems.") Advertising by all media is open to the brewers as long as it is used to give the public information about the product, not to attribute particular virtues to beer consumption. All such advertisements must be approved by the province of British Columbia through the Liquor Control and Licensing Branch of the Ministry of Consumer and Corporate Affairs (LCLB).

Other elements of promotional strategy are also possible for the breweries, though restrictions abound in these areas as well. For example, the breweries are allowed to sponsor local amateur and professional sports teams and sporting events (with the exception of automobile racing, as it is seen as unsuitable to associate driving with an alcoholic beverage of any kind). Such support until recently could not be associated with a particular brand of beer, but rather had to be sponsored by the brewery as a whole (e.g., the "XYZ" brewery which sells "Special Brew Beer" cannot have "Special Brew Beer" sponsor the team or event, but must sponsor it as "XYZ" brewery). Roughly twelve brand sponsorships per year are allowed currently, as is the case in Ontario. These limitations have encouraged the national breweries to associate themselves, either through purchase or marketing agreements, with major professional sports teams in Canada including baseball, hockey and football, and with major sporting events such as international downhill ski races, water skiing and tennis tournaments. Also banned from the brewery's promotional options are the distribution of free gifts such as baseball caps, t-shirts, mugs and glasses, pennants, posters and the like. The result is that promotional activities have been carried out on a relatively large and costly scale using print and airwave media and professional sports. Small-scale promotion and advertising is limited by both regulatory and cost considerations, perhaps leaving small local breweries at something of a disadvantage.

In addition to the foregoing kinds of advertising and promotional activity, breweries employ salespeople to promote their particular brand to licensees. Salespeople seek to encourage licensees to purchase their beer for on-premise draft and bottle sales. (All licensees selling beer for off-premise consumption must carry a range of beers from all the brewers.) Salespeople are allowed to buy rounds of beer for no more than one table at a time (at which they must be sitting) to illustrate their beer's virtues to patrons of a licensee. Salespeople are also active in providing support for sports teams and events at the local level, and are allowed to provide them with limited quantities of free beer for social events. All such activities are closely monitored both by the British Columbia Brewer's Council and by the LCLB for irregularities and for infractions of the regulations. As with the other strategic elements, the scope for strategic action in the promotion area is limited by current practice and regulations.

Summary of Beer Marketing in British Columbia

Marketing is much more than merely advertising or packaging a product, and spans a range of decision elements. For a truly competitive market environment to exist, choices must be available in all four strategic areas since all function jointly to form the marketing mix. In British Columbia all elements of marketing strategy are available to the brewers for competitive purposes. However, all strategic areas are also limited by the nature and scope of present rules and regulations which govern the marketing environment for beer in "ritish Columbia. These regulations will be studied in greater depth in Chapter 7.

Footnotes to Chapter 5

1. M. Dale Beckman, David L. Kurtz, and Louis E. Boone, *Foundations of Marketing: Second Canadian Edition*, (Toronto: Holt, Rinehart and Winston), 1982, p. 6.

2. *Foundations of Marketing*, *op.cit.*, p. 14. A recent text is devoted entirely to the issue of marketing strategies. See David W. Cravens, *Strategic Marketing*, (Homewood, Illinois: Richard D. Irwin), 1982.

3. Province of British Columbia, *Report of the British Columbia Liquor Inquiry Commission*, (Victoria, B.C.: The Queen's Printers), 1970, p. 18.

CHAPTER 6

The Pricing of Beer in British Columbia

Beer pricing in British Columbia is complex and requires careful consideration. Two separate, but related, facets of beer pricing are discussed here: pricing strategies and the decision-making processes of brewers, and the formal institutional rules which control the methods open to the brewers for implementing price changes.

The Pricing Strategies for Beer

Returning to the marketing concepts developed in the previous chapter, we recall that pricing strategy was among the most complex and the most important. Here we will treat both the strategy in general and its application to beer pricing in British Columbia.

Our previously cited marketing text notes this about pricing policies:

> The amount of promotion, product type, mode of manufacture, market coverage, degree of product obsolescence, technological change, type of production, market share, length of distribution channels, stage of market, profit perspective, product versatility, promotional contribution to line, extent of ancillary services, and length of use also affect prices ....
>
> Effective pricing is influenced by a variety of factors and circumstances. It involves far more than the rigid application of a pricing formula. The starting point is the careful analysis of the influences upon pricing decisions as they fit into an overall marketing strategy.
>
> Pricing should not be allowed to become mechanistic or ritualistic. Long-run considerations should predominate.[1]

This provides us with a general overview of the pricing strategy firms must pursue. But the application of this strategy to beer pricing in British Columbia has been limited by the pricing rules determined by the provincial government. Only since March, 1981, have the breweries been free to set their prices; prior to that time they jointly made application to the Minister responsible for liquor distribution for price increases which either were or were not granted as the Minister saw fit. With the advent of "open pricing" the breweries are now free to set the price at which their products will sell in the LDB stores. Prices can be changed once a month.

Pricing decisions are motivated by several factors. First, brewers need sufficient revenue to cover costs and make adequate return on their capital. Thus as costs rise, prices will rise to cover these costs. Pricing also allows the breweries to establish a hierarchy of brands. Some brands become "flagship" or "leading" brands at relatively high prices, while other minor brands are sold at lower prices. The minor brands enable breweries to increase production so as to maintain high plant utilization, but do not constitute the backbone of their revenues. This price hierarchy in the U.S., for example, stretches from super-premium imported and domestic beer down through generic beer sold in supermarkets. One can identify four price strata -- super-premium, premium, standard, generic. Within each there will be a tendency towards price similarity, with occasional promotional pricing to stimulate sales in well-defined areas or market segments.

When contemplating price changes brewers must concern themselves with the reactions of consumers and with the response of competitors. On the production side a related concern is whether there is sufficient capacity to increase output significantly as a result of a successful sales and marketing campaign. As a rule, brewers will not want to have their premium product selling at a price much below the premium beers of their competitors. They do not want to have their premium appear "cheap" and therefore lower in quality. In addition, deep discounts for promotion of premium lines can be very costly. These lines constitute the bulk of the brewery's sales, and the discount would mean a large loss in revenue. Breweries may still choose to discount premium products, but such discounts are likely to be confined to promoting well-specified brands or to marketing campaigns for launching a new product or packaging idea. It is more likely, therefore, that brewers will seek to use minor brands, with correspondingly small volume and lower lost revenues, for price discounts. Promoting minor brands can also serve to stimulate sales and advertise the brewery's other products.

Public acceptance of price changes is of paramount importance. First, it is probably advisable for price increases to be relatively small and frequent so that the consumer is not as aware of the changes as would be the case with infrequent, larger price increases. Despite the fact that beer consumption has been generally shown in the past to be unresponsive to price increases (termed "inelastic demand" by economists), a sufficiently high price change may increase the risk of having higher prices lead to lower sales, offsetting revenue gains from the higher prices. The response of competitors is also critical. They may or may not follow suit. If they do not match price changes, the brewery that raised prices runs the risk of being out of step with other comparable beers and losing business to the competition. Such unmatched price increases may have to be rolled back, with subsequent loss of face and possible loss of business.

Price cuts involve analogous considerations. One question to be addressed is, will the public respond to price cutting and, if so, will the response offset lost revenue from the lower price? It is unlikely that this question can be answered affirmatively for major brands. A second question is, will the competition match price discounts, perhaps leading to a price war and resulting in lower revenues without necessarily gaining any volume? And finally, questions still remain as to the specific brand to be discounted, the depth of the discount and its duration, all of which are exceedingly complex and interrelated issues.

It should now be clear that the pricing decision is multi-faceted, and requires the marketer to integrate pricing into the whole marketing mix strategy. Pricing most obviously needs to be combined with new product innovation and with promotional strategy. Accordingly, as was mentioned at the outset, pricing is an integral part of the larger marketing mix problem and cannot be abstracted from this broader problem, which, in turn, cannot be isolated from production and financing issues. In short, while pricing strategy is a central element in marketing and in the management decision-making process more generally, it is only one such element and it must be seen in this context. As a result, pricing strategies which are not linked with product, distribution and promotional strategies are unlikely to be effective.

The Pricing Process: Changing Beer Prices in British Columbia

For most producers, wholesalers and retailers changing prices is straightforward. They merely notify their customers of the price change and its effective date. This is not the case, however, for British Columbia beer prices and price changes. A much more complex procedure is in place, administered by the Liquor Distribution Branch of the British Columbia Ministry of Consumer and Corporate Affairs.

Pricing of imported beer comes closest to the pricing mechanism for products in other markets. The price for imported beer is set as follows in the LDB stores. First, the LDB places an order for a given imported beer at the posted price through its agent (see discussion in Chapter 4). The retail price for imported beer is built up in the following way:

i. The basic foreign supply price is the base.

ii. To this basic supply price the local agent must add his/her freight, warehousing and all handling and service charges.

iii. The foreign supply price and all other foreign funds are converted to Canadian funds and added to domestic charges to get total cost in Canadian dollars to LDB.

iv. Customs duty is then added to this sum. Duty is levied at a specific rate per liter based, in part, on the alcohol content.

v. Federal sales tax of 12% is then levied against the total of the costs in items i-iv to yield the duty paid cost to the LDB. Canada Customs can increase the "value for duty" upon which federal sales tax is calculated if they deem it to be higher than the suppliers price.

vi. The LDB now adds its markup against the duty paid cost. The markup is presently set at 83% on imported beer (compared with roughly 50% on domestic beer).

vii. Finally, the LDB rounds up the resulting figure to a number which, when 7% Social Services Tax is added, will yield a final shelf price for the public which endsin a 5 or 0, eliminating the need for the LDB to handle pennies.

As an example, let us assume that the LDB supply cost in Canadian funds (our item iii. above) is $4.00 per case of 12 bottles of foreign beer. Based on the liters per case and alcohol content per liter, duties levied amount to $.95 per case. Adding the duty of $0.95 now raises the cost of the case up to $4.95. Against this is now levied the 12% federal sales tax leading to a duty paid cost (item v above) of $5.55. We now add the LDB markup of 83% to get a total of $10.16. The final stage rounds up to a price that will give a 5 or 0 upon addition of the 7% Social Services Tax. In the present example to get a price ending in 5 or 0 we must charge a price per dozen of $10.90.

Summary of import pricing example:

Step iii. $4.00 LDB cost

Step iv. Add duties of $.95 to get $4.95 total

Step v. Add 12% federal sales tax to get $5.55 total

Step vi. Apply LDB mark up of 83% to get $10.16 total

Step vii. Round up to a number that when 7% is added ends in a 5 or 0. In this case the the 7% social services tax yields a final shelf price to the public of $10.90 per dozen.

Under this system any foreign supply price is subjected to the preceding calculation. As the foreign supply price changes so does the shelf price. Under the LDB pricing system, prices can be changed once per month for foreign beer (in fact for all LDB products). This is also the timing for the pricing process for domestic beer that follows; changes are permitted only once a month and in a tightly specified manner.

Since March, 1981, as we noted at the outset, the breweries in British Columbia have been free to establish the price at which they want each product to sell at LDB stores, and, by extension, at licensees for off-premise sales. The breweries begin by establishing a price at which they will sell beer to the LDB. This price must include all costs of production and distribution and marketing, plus federal excise duty and sales tax, plus the desired rate of profit. The LDB then applies to this price their markup which depends on alcoholic content. Packaged beers with less than 4.0% alcohol by volume have a 43% markup, beers between 4.01% and 5.69% have a 50% markup and beers over 5.7% alcohol content by volume pay the highest markup of 54%. To this total (the brewer's price plus the applicable LDB markup) is then added the 7% Social Services Tax. Once again the price is rounded up to the nearest 5 or 0 so that the brewers actually work backwards from a desired shelf price to derive their price to the LDB. So far the process does not differ greatly from that for imported beer.

Two procedures greatly complicate this scenario: the method by which the LDB actually collects its markup and in return pays the brewers, and the method by which price changes are implemented. The system by which the province collects its markup is called the malt levy system and dates from 1977. Under this system the LDB must receive the LDB markup applicable to a particular day's production, which depends upon the strength of the beer and whether it is draft or packaged beer, one week after bottling or kegging, in cash or certified check. In turn, the breweries are then permitted to ship directly to licensees for full cash settlement when an order is placed, and to LDB stores. The LDB remits 95% of the value of the delivered beer (as distinct from the 100% for licensees) within 3 weeks of delivery and settles the balance within 30 days. The malt levy does apply to Old Fort which operates like other LDB suppliers and is paid upon delivery, not upon production.

Prior to 1977, all beer was sold through the LDB. This required the LDB to operate a very busy "beer order desk". In the present system the breweries can deal directly with licensed outlets. Under the malt levy system, breweries pay up front so collection of LDB markup is independent of the end consumer. The present system is somewhat more flexible, but allows the LDB to benefit from the "float" (the balance between the collection of the malt levy and the subsequent payment to the brewers for the beer by LDB). The 7% social services tax is also collected at the same time as the malt levy adding to brewers' costs and government "float".

As if all this is not complicated enough, there are some major wrinkles in the system related to the sales to licensees of both bottle and keg beer. The complications derive from the 7% sales tax which has already been built into the price structure. However, the licensees have a different sales tax structure in selling to the public. Licensees must collect sales tax on their sales to the public so that the 7% does not apply to the purchases by licensees. The Liquor Control and Licensing Branch (LCLB), the parallel body to LDB responsible for licensing and control, assesses licensees a 5% licensing fee on all their purchases. As a result, packaged beer sold to licensees is discounted to reflect the difference between the 7% sales tax and the 5% licensing fee. The discount must then be claimed back from the LDB. When licensees sell beer they must add the normal provincial sales tax of 6% on top of their markup which already includes the 5% licensing fee. In short, the markup system is complex and quite different from that which would be in effect for traditional retailing in, for example, food and clothing.

The price change mechanism is also quite complex. By the 12th day of each month brewers must notify the LDB of a desired change in the retail price of beer (either draft or bottle) which will take effect at the beginning of the first accounting period in the following month (accounting periods begin on Wednesdays and do not coincide perfectly with months). Breweries wishing to change their prices must also inform the public via a press release stating the nature of the price change and the brands to which it applies. Competing breweries then have a short time frame to respond to this proposed change. This "window" varies in length depending upon the shape of the month in question (e.g., the number of days in the month and placement of weekends within the month) and stretches from the 12th of the month through to a day that leaves ten working days to the beginning of the next accounting period. While the window is "open" the competing breweries can make price adjustments. The brewery that initiated the change can also respond to competitive moves from the other brewers. However, by 5:00 on the day that the window closes the breweries must have decided which prices they want to appear for their products at the beginning of the next accounting period.

Several points about this system need to be emphasized. First, brewers can change shelf prices, both for bottles and kegs, only once per month, which makes it difficult for them to run short term promotions for specific lines and/or new products. Second, since the competition must be informed through the media of the proposed change, little competitive advantage can be gained since the element of surprise is virtually eliminated. The existence of the window and the various adjustments and readjustments that may take place while the window is open explains in large measure why there are almost always uniform price changes for all brewers, since all of the normal market adjustments in price are compressed into the period during which the window is open. Details provided by the brewers of the price changes that occurred in June and in September 1982, reveal that the brewers do react quickly to each other's competitive pricing behaviour. Unfortunately, all of these competitive tactics are hidden from the public, and the end result is a uniform price in most instances. As noted at the outset of this chapter, brewers do not want to have their product priced very differently from each other. At the premium end of the price spectrum, lower priced beer may lead the public to conclude that the beer is of lower quality. With standard quality brands brewers run the risk of pricing their product out of the market if their prices are markedly higher than their competitors'corresponding brands.

A third and final point also deserves mentioning. The price deregulation that took place in March, 1981, is something of a misnomer; prices are far from being completely deregulated. Prices in fact have been deregulated to the extent that the breweries are now free to charge whatever uniform price that they choose to charge across the entire province. Thus brewers are not allowed to charge different prices in different parts of the province, further inhibiting their ability to compete with each other for local markets. Local price competition might otherwise be able to create strong brand preferences. This requirement of uniform pricing also means that people in the Lower Mainland and in Prince George and the Kootenays are paying more than they would otherwise since each area has a brewery. Beer is what economists call a classic weight gaining industry since it gains weight in the production process (largely because of the water in the beer). Such industries typically have strong locational advantages near their markets. Because of high transportation costs for beer, breweries can sell their products more cheaply closer to the brewery. In British Columbia differential pricing is prohibited, erasing, for example, the locational advantage of the brewery in Prince George in servicing the Cariboo and the brewery in Creston in servicing the Kootenays. The existence of uniform prices across the province is a barrier to competition and takes away many marketing strategies that would otherwise be open to breweries.

Some other points to conclude the discussion about LDB price changes. First, remittance of malt levy charges commence one week prior to the date at which the new prices become effective reflecting the one week lag between production and deemed sale. This insures that the LDB gets its malt levy on the revised prices. Second, the LDB sells off all stock at the prices at which they were originally purchased. They do not change prices on existing inventory but only on new stock which entered inventory at new prices.

Finally, the prices charged by licensees are also regulated, but by the LCLB, in two ways. The LCLB no longer places a maximum price per glass on draft beer. The LCLB does watch for both price gouging and use of draft as a loss leader. Otherwise the draft pricing is flexible. The LCLB also places a maximum fixed charge of $1.60 per dozen markup over LDB shelf prices on all off-premise sales made by licensees. Individual licensees can charge less than this maximum markup.

Concluding Comments

As we noted at the outset, the pricing of beer is an exceptionally complex process. This complexity begins with the pricing strategies of the brewers and extends through to the system of markups by the LDB and to the process by which beer prices can be changed. Most of the complexity is hidden from the public, not intentionally, but merely by its esoteric nature. This chapter has attempted to examine this pricing process so that the public can understand it and in turn gain some insights into the pricing behaviour of the breweries and of the Liquor Distribution Branch and the Liquor Control and Licensing Branch as well. A proper appreciation of the pricing process can also help to clear up much of the current confusion about such factors as the similarity of beer price changes and the existence of uniform prices across the province. The central reason for such pricing mechanisms is government regulation of the marketing and distribution of brewery products. Accordingly, we next turn to a review of the regulations that are in force in British Columbia and to their rationale -- the behaviour of the regulators.

Footnotes to Chapter 6

1. M. Dale Beckman, David L. Kurtz and Louis E. Boone, Foundations of Marketing: Second Canadian Edition, (Toronto: Holt Rinehart and Winston), 1982, p. 390. The whole question of pricing strategy is dealt with by Beckman, *et al.* at some length and occupies two whole Chapters 13 and 14, pages 369-438. This is not at all unusual in marketing texts as pricing invariably is a major focus for the discussion. See also David W. Cravens, Strategic Marketing, (Homewood, Illinois: Richard D. Irwin), 1982, Chapter 10, pages 291-317.

Chapter 7

Regulating Brewing and the Distribution of Beer in British Columbia

Introduction: The Rationale, the Strategy and the Basis for Regulating Brewing and Beer Distribution in British Columbia

Alcohol is a powerful and widely used drug, and its use has serious health implications both for the user (particularly the habitual large-scale user) and for society as well. As a result, society has seen it necessary to regulate the production, distribution and public consumption of alcoholic beverages. As societal values change, so do the regulations governing alcohol use, ranging from the complete prohibition of alcoholic beverages in the 1920's (though not in British Columbia) to the virtually unrestricted use of such beverages as in parts of Asia. In British Columbia we have progressively eased our restrictions since British Columbia first regulated alcohol in 1921. The rationale for control however, is still rooted in the concern for the health of the individual and of society and for the possible abuses which can, and do, result from excessive consumption of alcohol.

The strategy for regulating alcoholic consumption and distribution in this province has changed rather markedly since the publication of the Morrow Commission Report in 1970.[1] There has been a general relaxation of restrictions, and increasing acknowledgment that most individuals can use alcohol in moderation. As part of the evolution of regulation which the Morrow Commission set in motion, the control function has now been split into two separate, but related, functions. The Liquor Control and Licensing Branch (LCLB) of the British Columbia Ministry of Consumer and Corporate Affairs (CCA) is responsible for licensing hotels, neighbourhood pubs, restaurants and clubs that serve alcohol. On the other hand, the distribution of alcoholic beverages is controlled by the Liquor Distribution Branch (LDB) of CCA.

Authority for the LCLB derives from the Liquor Control and Licensing Act of 1976, under which the LCLB is authorized to issue detailed regulations to implement their control and licensing responsibilities. Analogously, the Liquor Distribution Act of 1976 provides the legislative base for the LDB to issue regulations concerning activities relating to the distribution and sale of alcohol in the province. We will look in some detail at these regulations to understand the regulatory environment within which breweries in British Columbia must operate. These regulations also provide essential institutional background to allow us to comprehend the impediments to more vigorous competition in the brewing, distribution and marketing of beer in the province.

The Liquor Distribution Branch:
Its Responsibilities and Regulations

Prior to the separation of the distribution and control functions in 1976, the provincial Liquor Control Board (LCB) had the dual responsibility for regulating both the distribution (largely through stores) and the licensing of establishments allowed to sell liquor to the public. This dual responsibility built a contradiction into the LCB operations, a contradiction with which the present two branches still live: the responsibility for the retailing and thus the marketing and promoting of beer, and at the same time the responsibility to control its use and consumption. This contradiction manifests itself in the need for LDB to raise $365 million in revenues in 1982/83, while LDB and LCLB also regulate conditions of sale and distribution.

Specifically, the Liquor Distribution Act establishes the Liquor Distribution Branch and empowers it as follows:

> The branch has the sole right to purchase, both in and out of the Province, liquor for resale and reuse in the Province in accordance with the provisions of the Importation of Intoxicating Liquors Act (Canada).
>
> Liquor Distribution Act, Section 2(2)).

Moreover, under this Act the Minister of Consumer and Corporate Affairs is empowered to appoint a general manager with the following power to:

> (a) determine the localities in which liquor stores shall be established throughout the Province, and the number, kind and situation of the liquor stores in each locality;
>
> (b) establish all necessary warehouses for storing and bottling stocks of liquor and products for the purposes of this Act;
>
> (c) provide for construction, acquisition or leasing in the name and on behalf of the government of premises for warehouse and store purposes, and procuring of furnishings, fixtures and supplies;
>
> (d) appoint or designate a person he considers advisable as an analyst for the purposes of this Act; and
>
> (e) perform all other acts required to properly and efficiently administer his responsibilities as defined by the minister and under and regulations. (Liquor Distribution Act, Sections (4a) through (4e)).

Under the terms of the Act, the General Manager and the Liquor Distribution Branch regulate the brewing industry in the following principal ways:

1. Establishment of the rates of markup for the various classes of domestically produced and imported malt liquor products;
2. Establishment of methods of collection and of settlement with the brewers as described in Chapter 6 on pricing;
3. Establishment of the present system of price changes as described in Chapter 6;
4. Establishment of a uniform price for all alcoholic beverages across the entire Province of British Columbia;
5. Control of point-of-purchase advertising and promotion in liquor stores;
6. Control of listed products and of sizes of packages to be sold (e.g., 6's, 12's, 24's, and cans);
7. Establish rules and markups for special orders of imported products;

8. Establish location and times for licensees to place orders and receive product from LDB stores. (Currently this includes all imported beer orders and orders for domestic beers of less than 20 dozen per week. Larger orders are filled by Pacific Brewers Distributors Ltd. and shipped directly to the licensee);
9. Establishment of number, location and hours of liquor stores as well as products carried in each store.

The Liquor Control and Licensing Branch:
Its Responsibilities and Regulations

Whereas the Liquor Distribution Branch is largely a retailer responsible for selling liquor (broadly defined to include all alcoholic beverages in excess of 1% alcohol by volume) through its stores, the Liquor Control and Licensing Branch (LCLB) is not involved directly with the public to the extent of the LDB and its retail network. LCLB does interact closely with the public with respect to complaints and new licensing proposals. It is instead charged with overseeing those retail establishments which are licensed to dispense alcoholic beverages to the public. The LCLB's activities are much more focused on control and regulation of alcoholic beverage sales than is the LDB.

Specifically, under the Liquor Control and Licensing Act of 1976 the LCLB is established and empowered to, "grant licences and permits to purchase liquor from it for resale and reuse in accordance with this Act and the Liquor Distribution Act, (Liquor Control and Licensing Act, Section 2(2)). As under the Liquor Distribution Act, a general manager is also created under the Liquor Control and Licensing Act and, "The general manager shall administer this Act and supervise all licensed establishments and manufactories of liquor, subject to the orders, directions and supervision of the minister." (Liquor Control and Licensing Act, Section 3(2)).

Under the Act the general manager is given broad authority as follows:

5. The general manager shall, subject to this Act and regulations,
(a) grant, transfer, suspend or cancel licences as provided by this Act and regulations;

(b) prescribe which regulations apply to a licence so granted;

(c) supervise the conduct and operations of licensed establishments;

(d) grant licences to all breweries, wineries and distilleries manufacturing in the Province;

(e) appoint or designate any person he considers advisable as an analyst for the purposes of this Act;

(f) authorize officials to issue licences and permits under this Act; and

(g) perform all other acts required to properly and efficiently administer his responsibilities as defined by the minister and under this Act and regulations. (Liquor Control and Licensing Act).

Again, as was the case of the general manager of the LBD, the general manager of the LCLB has broad powers and responsibilities. The following regulations and powers are particularly important for our purposes and for competition and pricing in the brewing industry.

1. Restriction and control of point of purchase advertising in licensed establishments;

2. Prohibition of promotions or discounts by licensees to the general public;

3. Licensing of breweries with a $1,000 minimum annual licence fee or else 0.4 cents per gallon of output (over $50,000 for the large breweries);

4. Restriction and control of media advertising and approval of all advertisements done by the breweries;

5. Restriction and control of all advertising and promotional activities by the breweries with prior approval for all advertisements and promotions;

6. Regulation of off-premise sales and setting of maximum markup on off-premise sales of $1.60 per dozen by the licensee;

7. Control over draft beer sales through restriction on changing source of supply to twice per year and the requirement of an affidavit that no inducement was received to change suppliers;

8. Investigation under the Liquor Control and Licensing Act, and holding hearings concerning licence suspensions or other licence restrictions.

Summary

Beer is an intoxicating substance, and has been closely regulated in the Province of British Columbia since 1921. Regulations range from production and distribution to retail sales by the government LDB liquor stores and by licensees. The sum total of these regulations is to greatly restrict the scope for beer marketing activity and marketing strategy within British Columbia. There is however great potential flexibility in the monitoring and regulating of beer production, distribution and marketing since the general managers of both the Liquor Distribution Branch and the Liquor Control and Licensing Branch have considerable latitude in setting regulations and procedures under the direction of the Minister for Consumer and Corporate Affairs. Suggested changes to the regulations and procedures occupy the greater part of the recommendations with which the present report concludes later in Part III.

PART TWO

EMPRICAL FINDINGS AND DATA ANALYSIS

Chapter 8

Analysis and Comparison of Beer Prices Over Time and Across Provinces

A Review of Beer Prices in British Columbia

Until 4 March, 1981, British Columbia beer prices were set by the Minister of Consumer and Corporate Affairs. The breweries operating in the Province petitioned the Minister for price changes, and were required to provide the rationale for the changes. All beer was priced according to its alcohol content and variations in price among beers of similar alcohol content were not allowed. A uniform price was established for the entire province, though prices in three northern communities incorporated an additional premium to reflect the greatly increased costs of servicing these distant areas. On 4 March 1981 the Minister allowed the breweries to set their desired retail prices directly, and the pricing process discussed in Chapter 6 was established.

This policy change enabled the breweries to establish different prices for different brands of beer. Its effect is clear in Table 8-1 which sets out beer prices in British Columbia from 16 October, 1950 through 3 November, 1982. Several interesting things can be gleaned from this table. First is the enormous stability of beer prices over more than two decades. From October, 1950, until November, 1974, the price of standard brands of beer increased from $2.17 per dozen (net of deposit but including Social Services Tax) to $2.75 per dozen, an increase of $0.58 or 26.8 percent over 24 years (about 1 percent per year). Since early November 1974 prices have increased 178 percent, more than six times their percentage increase over the preceding 24 years (about 12 percent per year). These trends are further illustrated in Figure 8-1, which shows graphically the price history of beer in British Columbia. (See Appendix Table 8A-1 for more detail on the period following the change in regulation, 4 March, 1981 - 3 November, 1982).

Beer Prices in Canada

To put British Columbia beer pricing into perspective, we have assembled a series of tables and figures analysing beer prices and government markups across Canada. Table 8-2 sets out percentage increases in price by province from 1946 to 1982, broken into five-year periods. The information in the table shows that beer prices across Canada increased at an average annual rate of around one percent from 1951 through the mid-1960's. From 1956-1965 prices in British Columbia did not rise at all . Even in the late 1960's prices in British Columbia increased at less than one percent per year compared with a Canadian average of 2.42 percent per year. On average, from 1946-1972, B.C. beer prices rose 1.76 percent per year, compared with the average of 1.78. The post-1970 experience in British Columbia presents a very different picture, with British Columbia beer prices rising more rapidly than those in Canada as a whole, offsetting earlier low growth rates. From 1972-1982 prices rose 10.77 percent per year in B.C., as compared with the Canadian average of 9.42%. Comparing beer price with CPI growth rates in the final two columns of the table shows that B.C. beer prices did not keep up with the CPI from 1946-1971, but grew faster than the CPI over the past ten years, especially 1981-82.

Figure 8-2 provides a graphic analysis of beer prices across the province. The growth rates discussed above are reflected in the price paths shown here. The stability of prices until the early 1970's is markedly visible in this figure, and the increasingly rapid growth since that time is striking. (Details of this figure are provided by Figure 8-1 for British Columbia, and in Appendix Figures 8A1-8A9 for the other provinces.)

Another way to examine these price movements is to construct an index of beer prices. Table 8-3 contains such an index with the year 1967 = 100 for each province. That is, prices for beer in that year are set equal to 100 and prices in all previous and subsequent years are compared with the 1967 prices yielding index numbers. For example if prices between 1967 and 1981 doubled then the index in 1981 would be equal to 200. In fact we see that Newfoundland, with a 1981 index of 208, experienced slightly more than doubling (actually a 108 per cent increase) in beer prices between 1967 and 1981. From this table we see that prior to 1967, Manitoba, followed closely by Newfoundland, had the most movement in beer prices. After 1967 Prince Edward Island experienced the most rapid increases in beer prices, followed by British Columbia, then Ontario.

A final means of looking at these prices over time is to compare them in each year to a common price base. In Table 8-4 Ontario is set as the base; each year Ontario's price index is set equal to 100, and beer prices in all of the other provinces are compared with prices in Ontario. We see from this table that the relative spread from one province to the next has decreased over time. In 1951, prices varied up to 1.64 times the Ontario price, while in 1981, the range was from .97 to 1.36 times the Ontario price. In the 1961-1971 decade, prices in western Canada decreased somewhat relative to Ontario, while Atlantic Canada remained relatively constant. In the most recent decade, from 1971-1981, movement toward Ontario price levels is apparent in all provinces with the exception of British Columbia.

To obtain insights into the factors which lead to the price changes we next turn to an examination of federal, provincial and brewer receipts per two dozen bottles of regular beer. Again, for ease of comparison, we convert these to index numbers taking 1967 = 100. Prior to 1967, provincial receipts grew fastest in Ontario and Manitoba. Since 1967 provincial receipts have grown most rapidly in Ontario (at an index of 499, implying nearly a five-fold growth), with British Columbia second (at 389, a nearly four-fold growth). Comparing this table with Table 8-3 we can see that provincial take from two dozen bottles of regular beer increased more rapidly than price in all provinces except the three most western provinces before 1967, and in all but Alberta since 1967. Thus the proportion of total beer revenue received by the province has, in general, increased over time.

Table 8-6 contains a comparison of the markups and taxes received by the provinces. Ontario levels are set equal to 100 for each year and markups in the other provinces compared with the Ontario level. One striking feature of the analysis is the remarkable convergence in the provincial revenue share that has occurred since 1951. At that time, the other provinces ranged from 2.17 times the Ontario level (for Quebec) to 10.64 times the Ontario level (for Saskatchewan). By 1981 these ranges had narrowed from 35 percent of the Ontario level (for Quebec) to a maximum of 2.16 times Ontario's level (Newfoundland). The range had shrunk from ten (the ratio of the highest to the lowest) to only six. We also see that Ontario and Quebec are consistently the lowest, with Quebec lower than Ontario. It is important to note that much of the difference in these figures can be attributed to significant differences in the extent of the distribution provided by each province. Atlantic and Western Canada (typified by highest revenue share) also have the highest provincial distribution costs; provincially-owned liquor stores generally distribute beer (Manitoba is an exception, where hotels distribute about 70 per cent of the bottled beer to consumers). In Ontario, the Brewers Wholesale and Brewers Retail distribute the product, leading to lower costs to the province, while in

Indices of federal government taxation beer are shown in Table 8-7, using 1967 = 100. Federal taxation which consists of an excise tax per unit of volume (gallon or hectolitre) plus a sales tax based on value, remained remarkably stable from 1951 to 1971; between 1971 and 1981, however, federal taxation rose by roughly 70 per cent. Federal revenues from taxing beer have grown more slowly than beer prices over time. This contrasts with provincial revenues, which have grown more rapidly than prices, particularly since 1967.

So far in this chapter the course of beer prices and of provincial and federal taxation/markups over time have been reviewed. Examination of the revenue share received by the breweries should reveal how much of the rising prices breweries have been able to capture. Tables 8-8 and 8-9 present indices of the revenue received by the breweries per two dozen bottles of regular beer by province over the period 1951 to 1981.

Table 8-8, shows that brewery revenues remained remarkably stable in all provinces but Quebec from 1951 to 1971, once more using 1967 as the base year. However, between 1971 and 1981 this changed dramatically. Brewery revenue in 1981 ranged from double 1967 levels in provinces such as Newfoundland and Manitoba, to a three-fold increase in Quebec. Comparing these with the price and federal/provincial revenue figures set out previously, we see that, in general, the breweries have maintained a relatively constant share of the price increases, that is, beer prices and brewery revenues rose at roughly the same rate, while federal and provincial increases off setting each other. (Provincial revenues rose more rapidly than price, while federal revenues rose less rapidly). Quebec is an exception; there brewery revenues have risen more rapidly than price, due, in part, to a lessening of provincial government distribution activity. In British Columbia breweries have, on average, suffered from a declining proportion of price increases since 1951.

Comparing brewery revenue shares across provinces in Table 8-9, revenues are generally higher east of Ontario than in provinces west of Ontario, Quebec being an exception prior to 1981. These data suggest that Western Canada may not be as profitable as the rest of Canada. (Cost and profit data are examined in more detail in Chapter 9.)

Beer Price Movements in British Columbia

We close this chapter with a more detailed examination of price movements in British Columbia, and an analysis of price dispersion over time.
Price behaviour since March 1981, when breweries were granted the right to establish retail prices for their products, is of particular interest.

Table 8-10 summarizes the number of beer price changes in British Columbia from 1946 to the present. Periods are separated by five-year intervals for 1946-1980, and for increasingly shorter periods since 1981. The number of prices changes per period closely parallel the rate of price increase shown earlier in Table 8-1. Over the decade 1946-1955 there were five price changes. Over the next ten years from 1956-1965 there were no price changes at all, and even over the 1966-1975 decade there were only six changes in the price of beer. The 1976-1980 period saw seven price changes more than the previous two decades. The freeing of beer pricing in 1981 gave rise to seven price changes. Finally, from January 1-November 3, 1982 there were a total of 54 price changes, or 216 percent as many changes as there were in the quarter century from 1946-1981. Of the 61 price changes from January 1, 1981 to November 3, 1982, 54 were price increases and 7 were price decreases. It is apparent that the freedom to change prices, together with the inflationary environment of the past 2 years have resulted in an enormous increase in the frequency of price changes.

In view of such price movements a significant increase in price dispersion is expected following the introduction of the "open pricing" system. This is precisely what occurred, as is evident from Table 8-11. This table presents information on the number of prices for regular beer and for all types of beer. Prior to March, 1981, there were three different prices for beer based on alcohol content: those with less than 4 percent alcohol by volume, those with between 4 percent and 5.7 percent alcohol by volume, and those with more than 5.7 percent alcohol by volume. By the end of December, 1981 prices had spread to include three prices for regular beer and five different prices for all beer. The price spread changed only slightly during this first nine months of open pricing, rising from $1.15 ($5.30 at the low end to $6.45 at the high end) to $1.20 ($6.10 to $7.30). By November 3, 1982, ten months later, there were nine different prices for regular beer and twelve different prices in total. The price range was up to $1.60 ($6.45 at the low end and $8.15 at the high end). Whereas nearly all regular brands sold for $5.90 in March, 1981, by November of 1982 prices ranged from a low of $6.45 (Pacific Gold) to a high of $8.15 (Charrington Toby), a spread of 26 percent. At the low end the price had increased from $5.30 to $6.45 (22 percent) while at the high end price had increased from $6.45 to 8.15 (26 percent). The new pricing policy, allowing the brewers to set prices, appears to have led to a marked increase in price dispersion.

These changes are captured graphically in Table 8-12 which shows the number of brands selling at each price for each date of price change between 4 March 1981 and 3 November 1982. It shows a significant degree of price dispersion in the 19 months since the price-change rule was put into effect. It also shows that, at the low end of the price range, consumers have not had to absorb significant price increases during a period of otherwise rapidly rising prices.

Appendix Table 8A-1 to this chapter lists all of the brands of beer sold in the province and shows how their prices have changed since the open pricing policy was instituted.

Summary and Conclusions

Beer prices in British Columbia have risen more rapidly than elsewhere in Canada over the decade 1972-1982. Over the period 1946-1982, however, they have risen at just about the same average annual rate as the average over the provinces (3.85 percent per year vs. 3.86 percent per year). We also saw that provincial revenues from beer rose more rapidly in British Columbia than prices, and that these increases were in part offset by slower rates of increases in federal levels of beer taxation. Overall the revenue share of breweries in British Columbia has fallen slightly; revenues have risen at a slightly lower rate than the beer prices.

A closer examination of the behaviour of prices after "open pricing" went into effect showed that there has been a marked increased both the frequency of price changes and in the dispersion of prices. As a result consumers are faced with a much broader array of beer prices today than prior to 1981. At the low endof the price range, these prices have not rised as rapidly as at the high end. In short, we are led to conclude that the goals of the pricing policy - the provision of choice to the consumer and of price competition in the market place - are well on the way to being met. Price competition, however, is only one facet of a competitive market. We must examine the structure of costs in the brewing industry, the structure of the industry itself, and the constraints under which it operates before stronger statements about competition in the British Columbia brewing industry can be made. Accordingly, we turn next to an analysis of the costs faced by producers of beer in British

Columbia. We then look into the structure of the brewing industry as a whole (i.e., the number of firms and their portion of the market for beer). Finally, we will delineate recommendations for enhancing competition in the brewing industry in British Columbia.

Table 8-1

B.C. DOMESTIC BEER PRICE HISTORY

Date	Retail	Sales Tax	Net Price	Deposit	Gross
Oct.16, 1950	2.10	.07	2.17	.25	2.42
May 16, 1951	2.15	.07	2.22	.25	2.47
March 9, 1954	2.15	.12	2.27	.25	2.52
July 17, 1967	2.20	.12	2.32	.25	2.57
Dec. 1, 1967	2.25	.13	2.38	.25	2.63
June 1, 1971	2.45	.14	2.59	.25	2.84
Oct. 1, 1973	2.61	.14	2.75	.25	3.00
Sept. 9, 1974	2.61	.14	2.75	.60	3.35
Nov. 12, 1974	2.81	.14	2.95	.60	3.55
June 24, 1975	3.24	.16	3.40	.60	4.00
March 27, 1976	3.24	.23	3.45	.60	4.07
March 11, 1977	3.50	.25	3.75	.60	4.35
Feb. 1, 1978	3.78	.26	4.04	.60	4.64
May 1, 1978	3.97	.28	4.15	.60	4.85
Sept. 1, 1979	4.30	.30	4.60	.60	5.20
Feb. 1, 1980	4.77	.33	5.10	.60	5.70
April 23, 1980	4.95	.35	5.30	.60	5.90
March 4, 1981	5.51	.39	5.90	1.20	7.10
Sept. 2, 1981	5.61	.39	6.00	1.20	7.20
Sept. 30, 1981	6.17	.43	6.60	1.20	7.80
March 3, 1982	6.31	.44	6.75	1.20	7.95
June 2, 1982	6.59	.46	7.05	1.20	8.25
Sept. 1, 1982	6.73	.47	7.20	1.20	8.40
Nov. 3, 1982	7.15	.50	7.65	1.20	8.85

BASE: One dozen, 12 ounce Regular Bottled Beer

Source: British Columbia Liquor Distribution Branch

Note: For further detail on the period 4 March 1981 - 3 November 1982, see Appendix Table 8A-1.

Figure B-1: Beer Price Trend

British Columbia

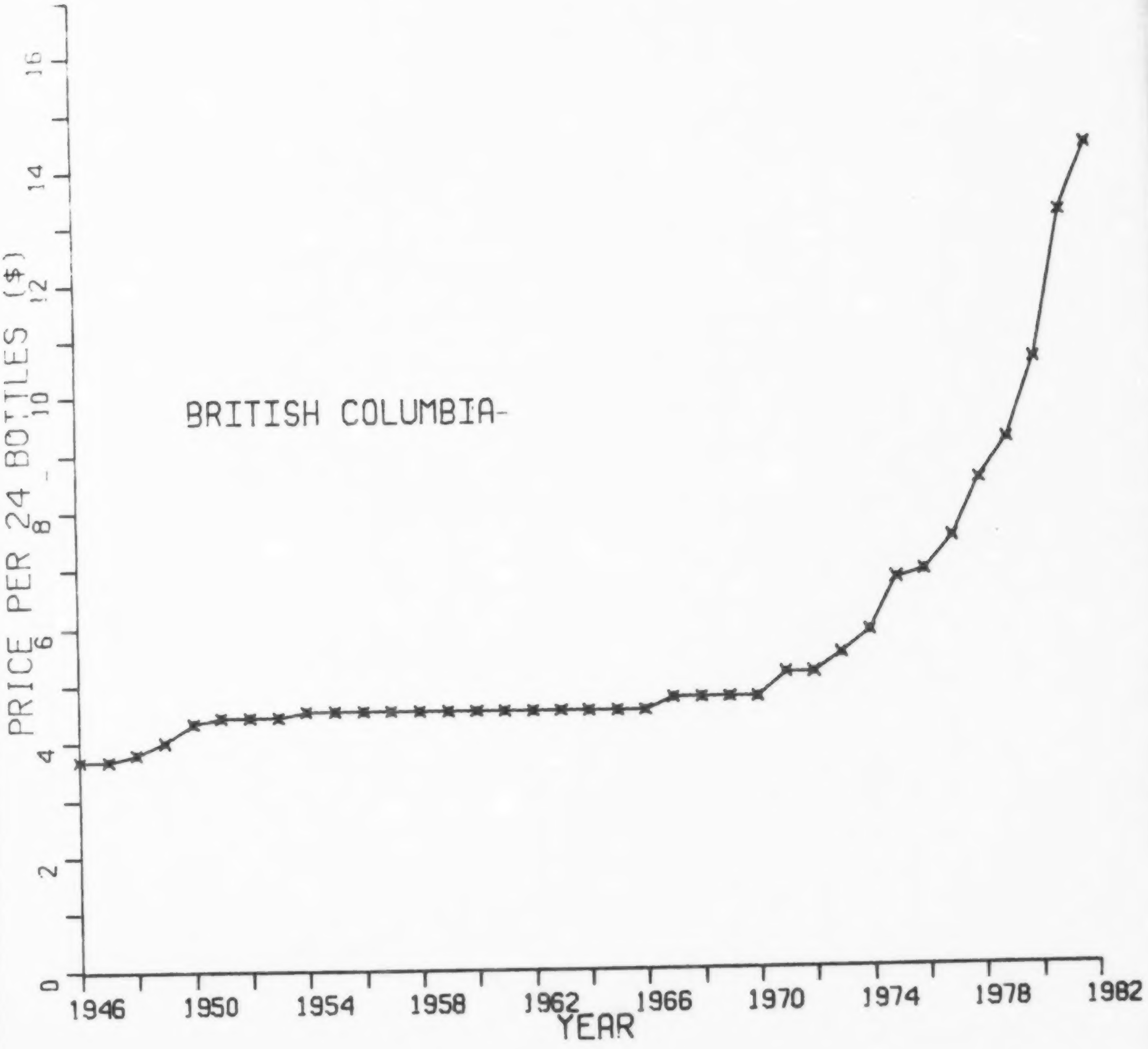


Table 8-2

Average Annual Growth Rates - Beer Prices[a]

Year	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Average[b]	CPI: British Columbia	CPI: Canada
1946-1950	-	6.58%	9.33%	10.93%	-1.60%	5.16%	3.49%	2.94%	1.92%	4.07%	4.76	8.11	7.14
1951-1955	0.00%	0.00	2.29	1.64	0.00	0.00	0.00	0.41	0.96	0.91	.62	2.53	2.55
1956-1960	1.29	1.68	.70	0.00	1.30	1.98	3.36	0.00	0.00	0.00	1.03	1.82	1.95
1961-1965	3.19	0.00	.34	1.52	1.46	0.58	1.27	0.60	1.36	0.00	1.03	.94	1.77
1966-1970	1.83	2.58	3.77	4.56	2.86	3.12	1.96	1.34	1.27	0.95	2.42	3.34	3.84
1971-1975	3.18	6.00	6.00	4.16	5.92	5.21	3.78	4.06	5.15	7.39	5.09	7.65	7.34
1976-1980	7.26	6.98	7.12	7.68	7.78	9.67	9.00	9.77	5.67	9.28	8.02	8.70	8.74
1981-1982 (Nov)	17.00	22.31	17.29	17.10	16.49	18.05	21.69	17.71	29.81[c]	19.13	19.66	11.22	11.78
1946-1971	1.49	1.85	2.87	3.24	1.05	2.08	1.87	0.93	1.02	1.36	1.78	3.14	3.13
1972-1982	8.13	9.89	9.12	6.87	9.20	9.42	10.07	9.77	8.91	10.77	9.42	9.70	9.71
1946-1982	3.48	4.03	4.61	4.67	3.22	4.22	4.03	3.34	3.12	3.85	3.86	4.98	4.96

a) Average annual rate of growth in the price paid by the home consumer for 2 dozen small bottles of beer. Does not include bottle deposit.

b) Simple average of growth rates over provinces. A sales-weighted average would show somewhat lower figures.

c) Year ends in March. Growth rate is calculated for one year and three months.

Source: Brewers' Association of Canada price information.

Figure 8-2: Beer Price Trends

All Provinces

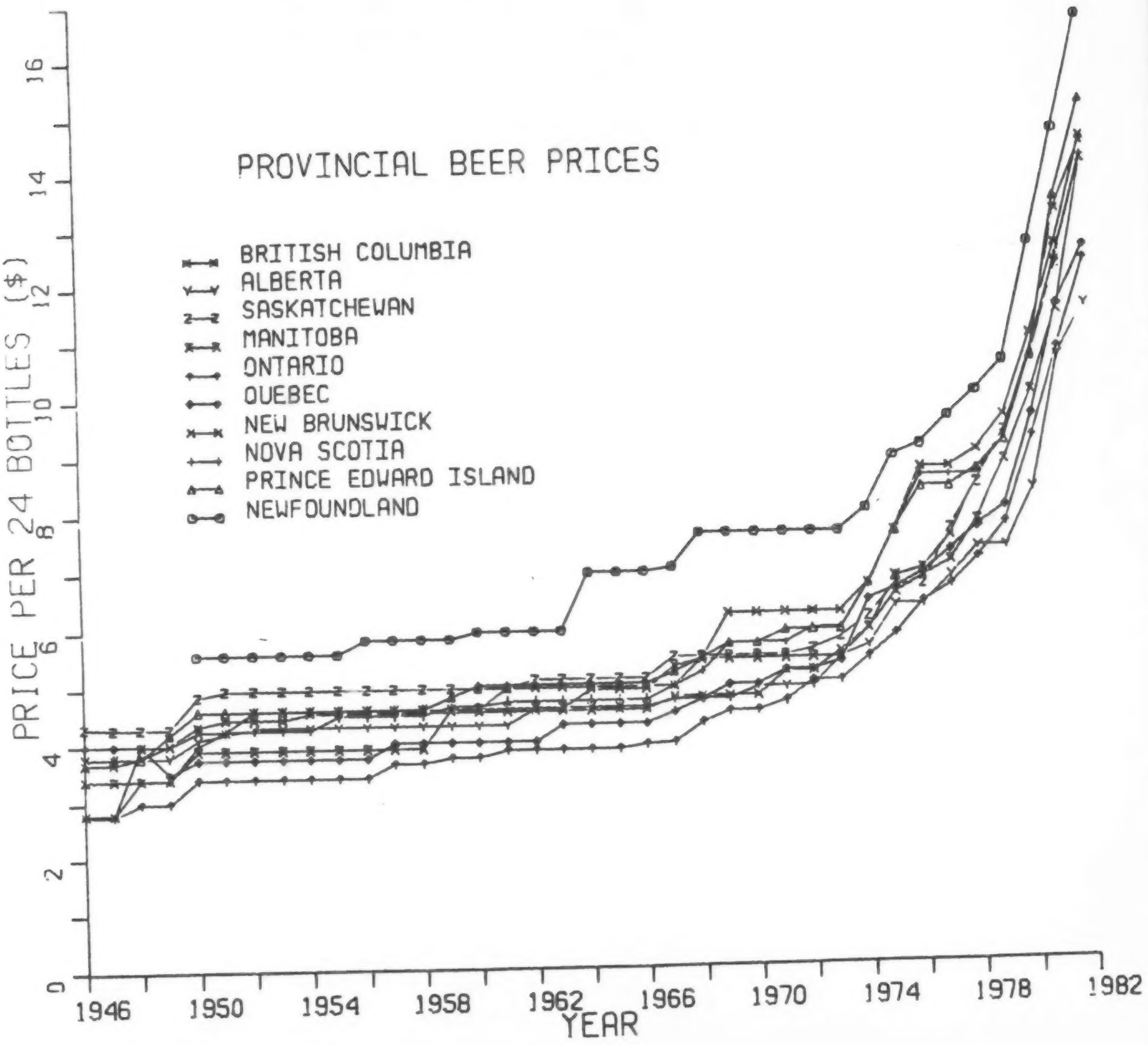


Table 8-3

Absolute Beer Price Index*: 1967 = 100

	1951	1961	1971	1981
Newfoundland	79	85	108	208
Prince Edward Island	88	96	113	291
Nova Scotia	85	95	115	286
New Brunswick	85	100	125	292
Quebec	83	89	116	256
Ontario	86	97	117	271
Manitoba	74	87	102	215
Saskatchewan	91	91	100	224
Alberta	89	91	104	225
British Columbia	93	95	122	277

* Price paid by final consumer for two dozen bottles of regular beer. Does not include bottle deposit.

Source: Brewers' Association of Canada price information.

Table 8-4

Relative Beer Price Index*: Ontario = 100

	1951	1961	1971	1981
Newfoundland	164	154	164	136
Prince Edward Island	135	130	127	125
Nova Scotia	125	122	122	115
New Brunswick	125	128	133	117
Quebec	110	104	112	107
Ontario	100	100	100	100
Manitoba	115	119	116	106
Saskatchewan	146	128	117	113
Alberta	123	111	105	97
British Columbia	131	118	111	123

* Price paid by final consumer for two dozen bottles of regular beer. Does not include bottle deposit.

Source: Brewers' Association of Canada price information.

Table 8-5

Absolute Index of Provincial Government Receipts per Two Dozen Bottles of Regular Beer* (1967 = 100)

	1951	1961	1971	1981
Newfoundland	42	58	116	216
Prince Edward Island	69	99	146	339
Nova Scotia	52	95	157	305
New Brunswick	45	102	172	292
Quebec	93	93	139	249
Ontario	30	64	177	499
Manitoba	31	68	101	253
Saskatchewan	82	82	100	256
Alberta	74	74	109	221
British Columbia	84	92	133	389

* Does not include bottle deposit

Source: Brewers' Association of Canada price breakdown information.

Table 8-6

Relative Index of Provincial Government Receipts per Two Dozen Bottles of Regular Beer* (Ontario = 100)

	1951	1961	1971	1981
Newfoundland	688	343	328	216
Prince Edward Island	599	302	214	177
Nova Scotia	369	239	190	131
New Brunswick	369	293	234	142
Quebec	217	083	055	035
Ontario	100	100	100	100
Manitoba	385	299	213	188
Saskatchewan	1064	374	219	199
Alberta	650	230	162	117
British Columbia	688	266	184	190

* Does not include bottle deposit.

Note: Provincial governments provide beer distribution services to varying degrees, accounting for much of the differences here.

Source: Brewers' Association of Canada price breakdown information.

Table 8-7

Absolute Index of Federal Government Taxation per Two Dozen Bottles of Beer (1967 = 100)

	1951	1961	1971	1981
Newfoundland	100	97	108	176
Prince Edward Island	100	96	108	173
Nova Scotia	100	96	108	173
New Brunswick	102	98	110	175
Quebec	92	88	103	185
Ontario	107	98	112	192
Manitoba	101	97	108	170
Saskatchewan	93	90	100	162
Alberta	100	97	108	180
British Columbia	94	90	100	172

Note: for any given year, these values should be indentical; a relative index should = 100 for all provinces. (No relative index is calculated)

Source: Brewers' Association of Canada price breakdown information.

Table 8-8

Absolute Index of Breweries' Revenue on Two Dozen Bottles of Beer (1967 = 100)

	1951	1961	1971	1981
Newfoundland	102	101	102	212
Prince Edward Island	94	95	100	250
Nova Scotia	94	95	100	253
New Brunswick	99	100	108	264
Quebec	82	90	115	349
Ontario	90	100	107	254
Manitoba	97	98	100	203
Saskatchewan	97	99	100	224
Alberta	94	99	100	247
British Columbia	98	99	100	265

Source: Brewers' Association of Canada price breakdown information.

Table 8-9

Relative Index of Breweries' Revenue
Two Dozen Bottles of Beer (Ontario = 100)

	1951	1961	1971	1981
Newfoundland	151	135	127	112
Prince Edward Island	119	108	107	113
Nova Scotia	119	108	107	114
New Brunswick	119	108	109	113
Quebec	72	71	84	108
Ontario	100	100	100	100
Manitoba	102	93	88	76
Saskatchewan	101	93	88	83
Alberta	97	93	87	91
British Columbia	105	96	90	100

Source: Brewers' Association of Canada price breakdown information.

Table 8-10

Number of Price Changes (B.C.)

1946 - 1950	3
1951 - 1955	2
1956 - 1960	0
1961 - 1965	0
1966 - 1970	2
1971 - 1975	4
1976 - 1980	7
1981	7
1982 (Jan-Mar)	11
1982 (Apr-June)	12
1982 (July-Sept)	16
1982 (Oct-Nov)	15

Note: A price change is defined as the movement of a brand or series of brands for a particular brewery to a new price level.

E.g.: Brand X increases 10¢ to 6.50

Brand Y increases 10¢ to 6.50

would be considered one price change if both were manufactured by same brewery, but

Brand X increases 10¢ to 6.50

Brand Y increases 10¢ to 6.20

would be 2 price changes.

Source: British Columbia Liquor Distribution Branch

Table 8-11

Number of Prices
One Dozen Bottles of Domestic Beer

Date	Number		Range	
4 Mar 1981	Regular	2	5.30 - 5.90	(3 br.@ 5.30)
	Total	4	5.30 - 6.45	
6 May 1981	Regular	2	5.30 - 5.90	(1 br.@ 5.30)
	Total	4	5.30 - 6.45	
2 Sept. 1981	Regular	2	5.90 - 6.00	
	Total	4	5.80 - 6.55	
30 Sept. 1981	Regular	2	5.90 - 6.60	
	Total	4	5.90 - 7.30	
2 Dec. 1981	Regular	2	6.10 - 6.60	
	Total	5	5.80 - 7.30	
30 Dec. 1981	Regular	3	6.10 - 6.75	
	Total	5	6.10 - 7.30	
3 Feb. 1982	Regular	4	5.60 - 6.75	
	Total	6	5.60 - 7.30	
3 Mar. 1982	Regular	5	5.60 - 7.25	
	Total	7	5.60 - 7.30	
5 May 1982	Regular	6	5.60 - 7.25	
	Total	8	5.60 - 7.30	
2 June 1982	Regular	7	5.60 - 7.55	
	Total	7	5.60 - 7.55	
30 June 1982	Regular	6	6.05 - 7.55	
	Total	7	6.05 - 7.55	
4 Aug. 1982	Regular	6	6.05 - 7.55	
	Total	7	6.05 - 7.55	
1 Sept. 1982	Regular	6	6.05 - 7.70	
	Total	8	6.05 - 7.70	
3 Nov. 1982	Regular	9	6.45 - 8.15	
	Total	12	6.45 - 8.15	

Source: British Columbia Liquor Distribution Branch. For more detail see Appendix Table 8A-1.

Table 8-12 Price Frequency

	Mar 4 1981	May 6 1981	Sept 2 1981	Sept 30 1981	Dec 2 1981	Dec 30 1981	Feb 3 1982	Mar 3 1982	May 5 1982	June 2 1982	June 30 1982	Aug 4 1982	Sept 1 1982	Nov 3 1982
8.50														
8.15														1
8.05														1
7.70													2	
7.65														8
7.55										2	2	2		8
7.50														3
7.35														2
7.30				1	1	1	1	1	1					
7.25								1	1				18	
7.20														3
7.15													3	1
7.05										14	17	18		1
7.00									2	3	3	3	2	
6.85												2		
6.75						4	4	20	19	4	2		2	1
6.70													1	
6.65													1	
6.60				23	21	17	17	1	1	5	4	2		
6.55			1					3	2	2	2	2		
6.50														
6.45	2	2												1
6.40				2	2	3	3							
6.25								4	4					
6.10					6	6	5							
6.05											1	2	2	
6.00			23											
5.90	20	23	2	2										
5.80			2		1									
5.70	3	3												
5.60							1	1	1	1				
5.50														
5.30	3	1												

APPENDIX: CHAPTER 8

Table 8A-1

British Columbia Beer Prices - Including Provincial Sales Tax
(One Dozen Regular Bottles)

	4 March 1981	6 May 1981	2 Sept. 1981	30 Sept. 1981	2 Dec. 1981	30 Dec. 1981	3 Feb. 1982	3 March 1982	5 May 1982	2 June 1982	30 June 1982	4 Aug 1982	1 Sept. 1982	3 Nov. 1982
CARLING														
Colt 45	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.65
Black Label	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.65
Pilsner	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.65
Old Stock	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.65
Toby	5.90	5.90	6.00	6.60	6.60	6.60	6.60	7.25	7.25	7.55	7.55	7.55	7.70	8.15
Old Vienna	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.65
Heidelberg	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.65
Kornenbrau	5.90	5.90	6.00	6.60	6.10	6.10	6.10	6.25	6.25	6.55	6.55	6.55	6.70	7.15
Calsberg	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.65
Standard Lager	5.90	5.90	6.00	6.60	6.10	6.10	6.10	6.25	6.25	7.05	7.05	7.05	7.20	7.65
Trilight	5.70	5.70	5.80	6.40	6.40	6.40	6.40	6.55	6.55	6.55	6.55	6.55	6.65	7.05
LABATT														
Columbia	5.30	5.30	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.55
Blue	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.55
Lucky Lager	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	6.60	6.60	7.05	7.20	7.55
Labatt's 50	5.90	5.90	6.00	6.60	6.10	6.10	6.10	6.75	6.75	7.00	7.00	7.00	7.15	7.50
Kokanee Pil	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.55
Kootenay Pale	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.25	6.25	6.60	6.60	6.60	6.75	7.10
Silver Spring	5.90	5.90	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.55
Columbia Extra	5.90	5.90	6.00	6.60	6.10	6.10	6.10	6.25	6.25	6.60	6.60	6.60	6.75	6.75
J.L. Extra Stock	6.45	6.45	6.55	7.30	7.30	7.30	7.30	7.30	7.30	7.55	7.55	7.55	7.70	8.05
Cool Spring	5.70	5.70	-- [a]											
Special Light	5.70	5.70	5.80	6.40	6.40	6.40	6.40	6.55	6.55	6.75	6.75	6.85	7.00	7.35
Budweiser		5.90[b]	6.00	6.60	6.60	6.60	6.60	6.75	6.75	7.05	7.05	7.05	7.20	7.55
MOLSON														
Old Style	5.90	5.90	6.00	6.60	6.60	6.75	6.75	6.75	6.75	6.60	6.60	7.05	7.20	7.55
Canadian	5.90	5.90	6.00	6.60	6.60	6.75	6.75	6.75	6.75	7.05	7.05	7.05	7.20	7.55
Export Ale	5.90	5.90	6.00	6.60	6.60	6.75	6.75	6.75	7.00	7.00	7.00	7.00	7.15	7.50
Brador	6.45	6.45	6.00[c]	6.60	6.60	6.75	6.75	6.75	7.00	7.00	7.00	7.00	7.15	7.50
Molson Light	--	--	--	--	5.80[b]	6.40	6.40	6.55	6.75	6.75	6.75	6.85	7.00	7.35
OLD FORT														
Pacific Gold	5.30	5.90	5.90	5.90	6.10	6.10	5.60	5.60	5.60	5.60	6.05	6.05	6.05	6.45
Yukon Gold	5.30	5.90	5.90	5.90	6.10	6.10	6.10	6.60	6.60	6.60	7.05	7.05	7.20	7.20
Old Fort Premium					6.60[b]	6.60	6.60	6.75	6.75	6.75	7.05	6.05	6.05	7.20
Iron Horse					6.60[b]	6.60	6.60	6.75	6.75	6.75	7.05	7.05	7.20	7.20

Source: British Columbia Liquor Distribution Branch

a) Discontinued
b) New Brand
c) Reintroduced, lower alcohol content

Figure 8A-1: Beer Price Trend

Newfoundland

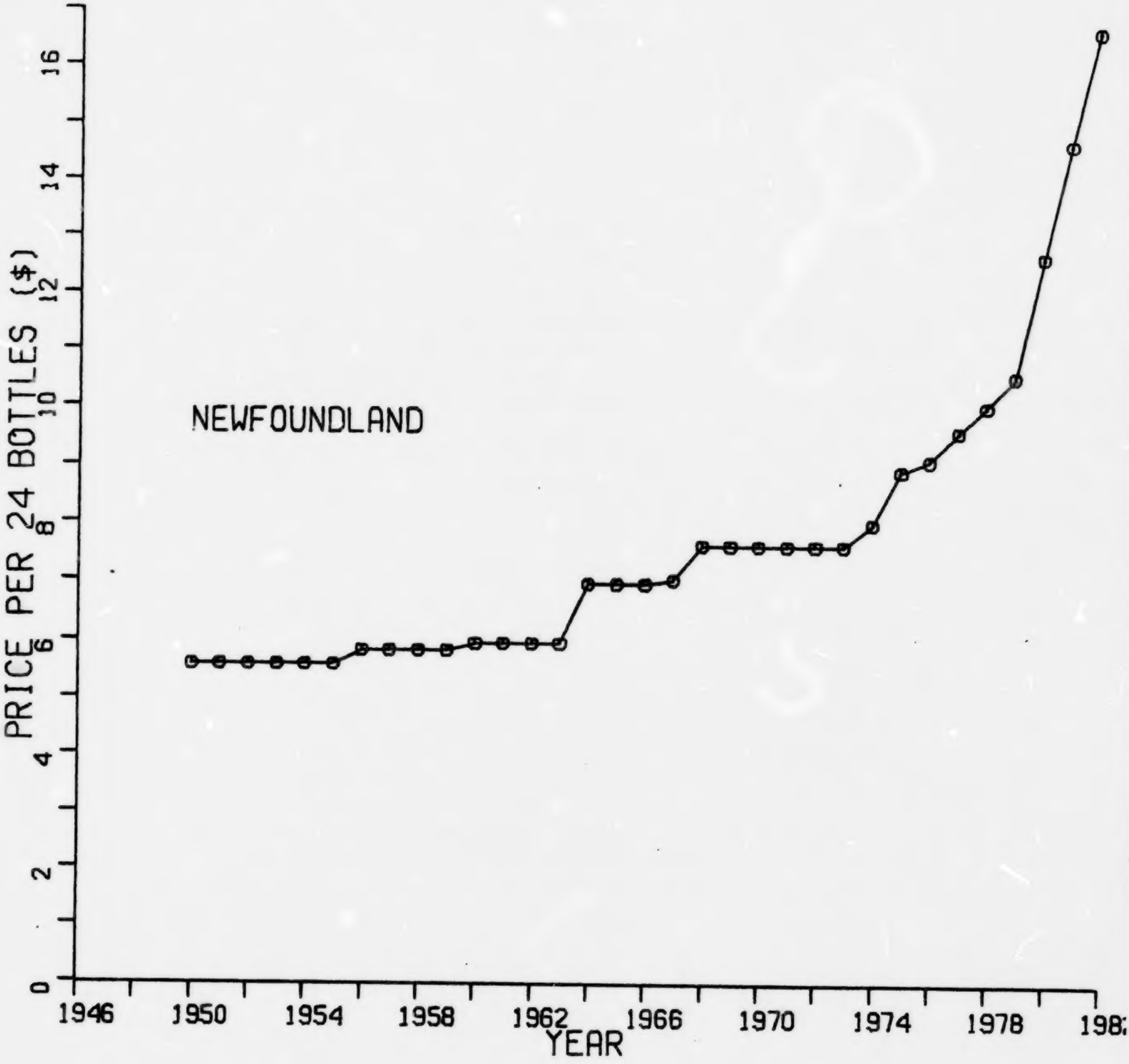


Figure 8A-2: Beer Price Trend

Nova Scotia

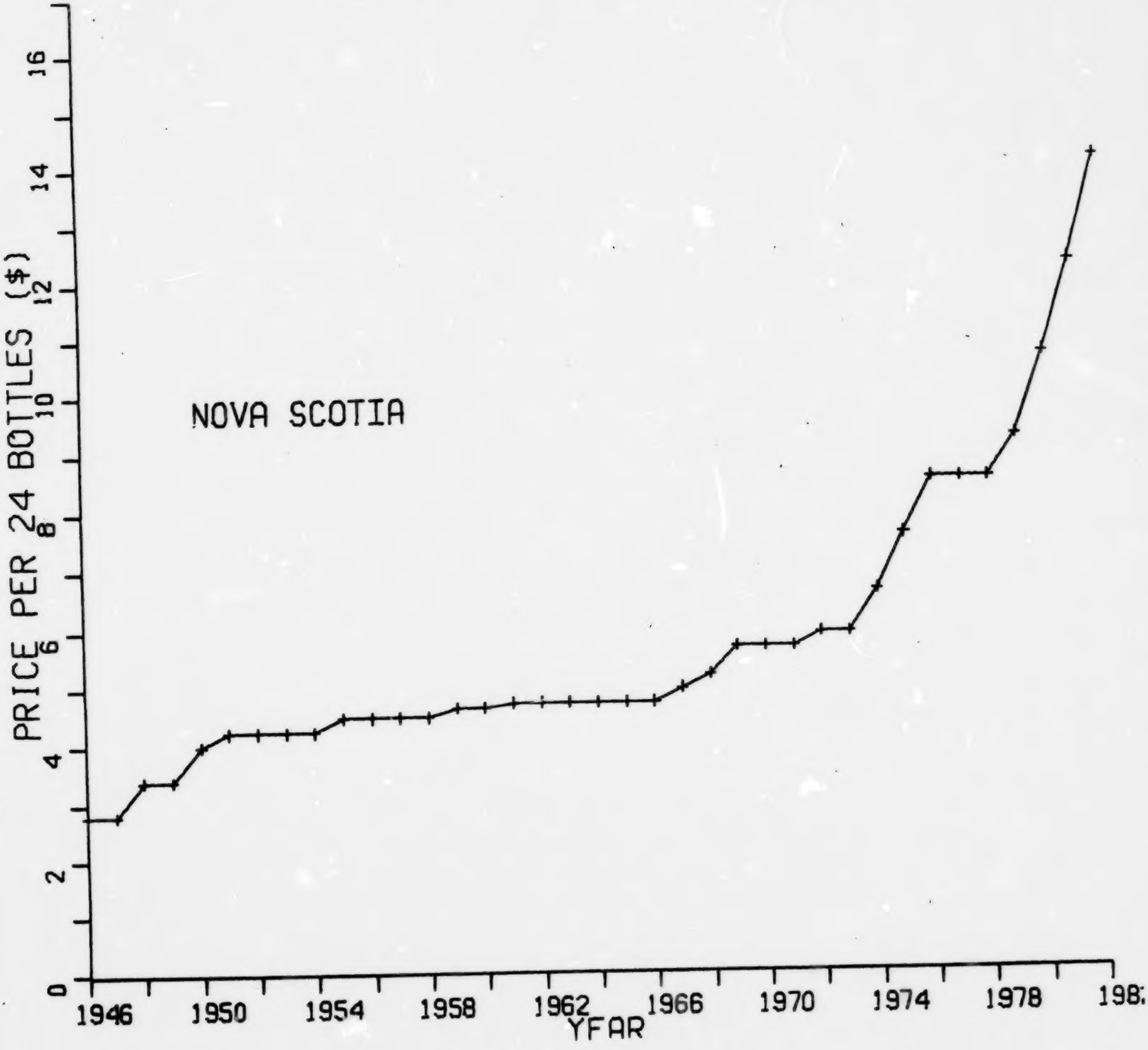


Figure 8A-3: Beer Price Trend

New Brunswick

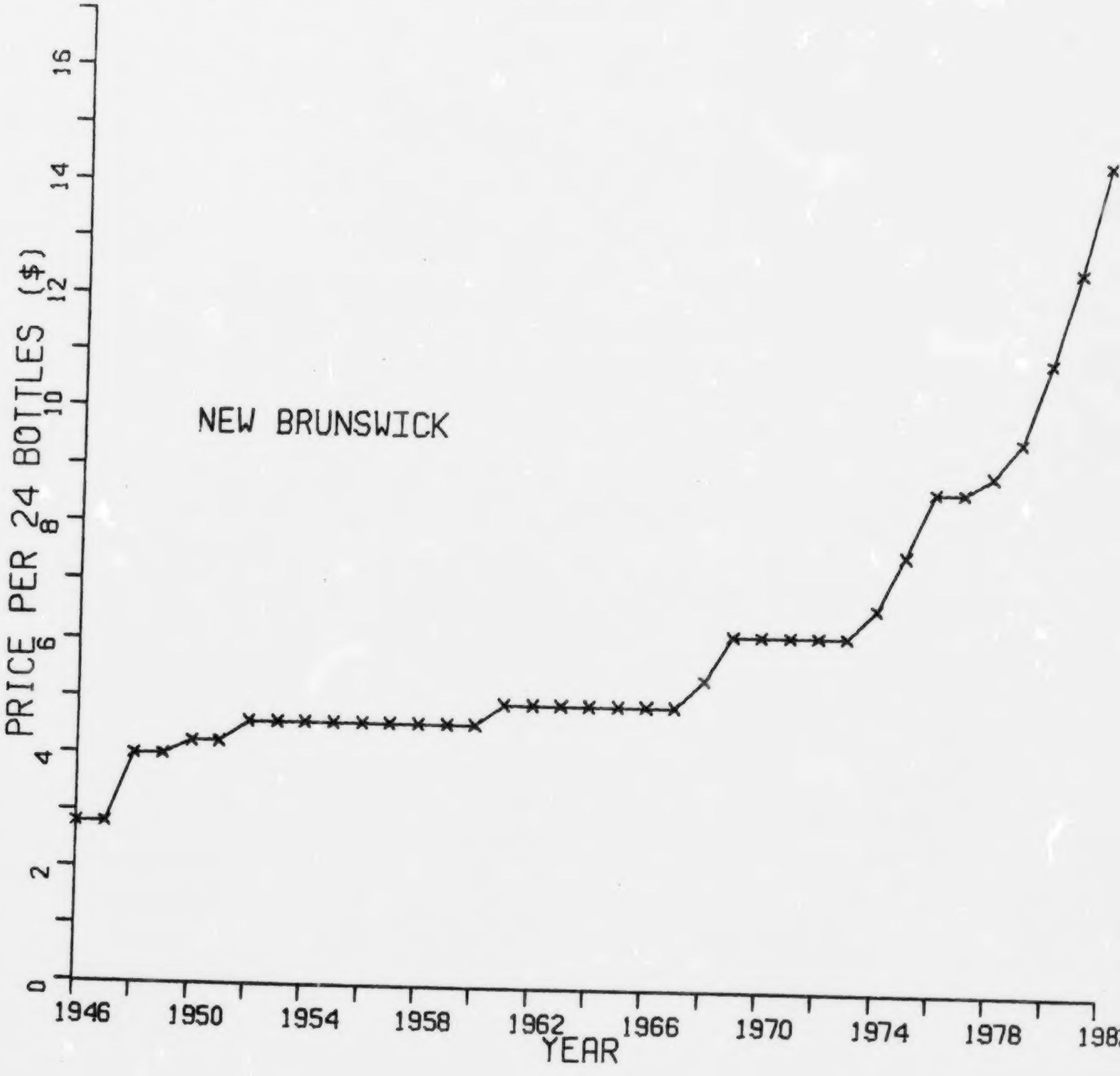


Figure 8A-4: Beer Price Trend

Prince Edward Island

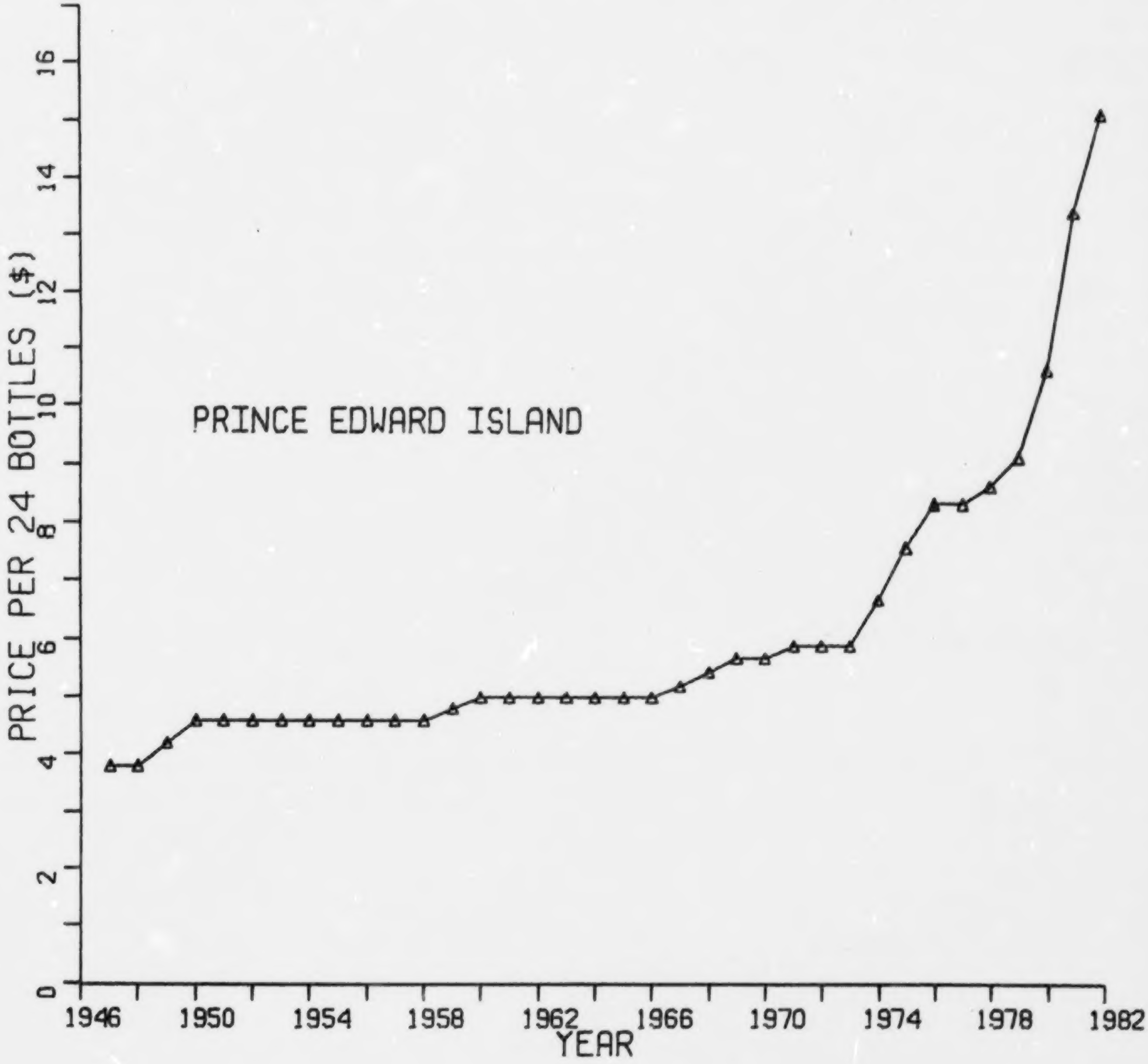


Figure 8A-5: Beer Price Trend

Quebec

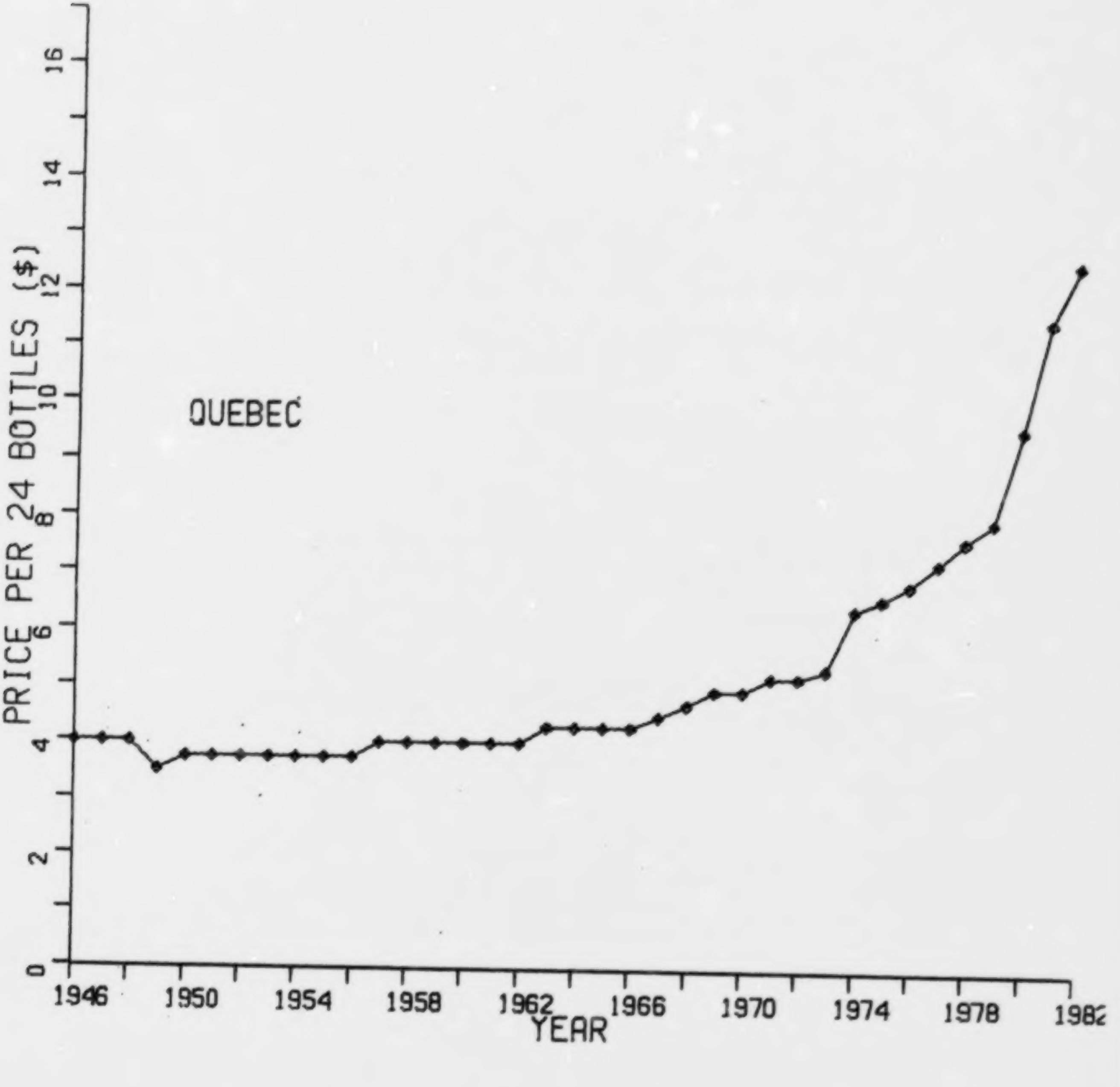


Figure 8A-6: Beer Price Trend

Ontario

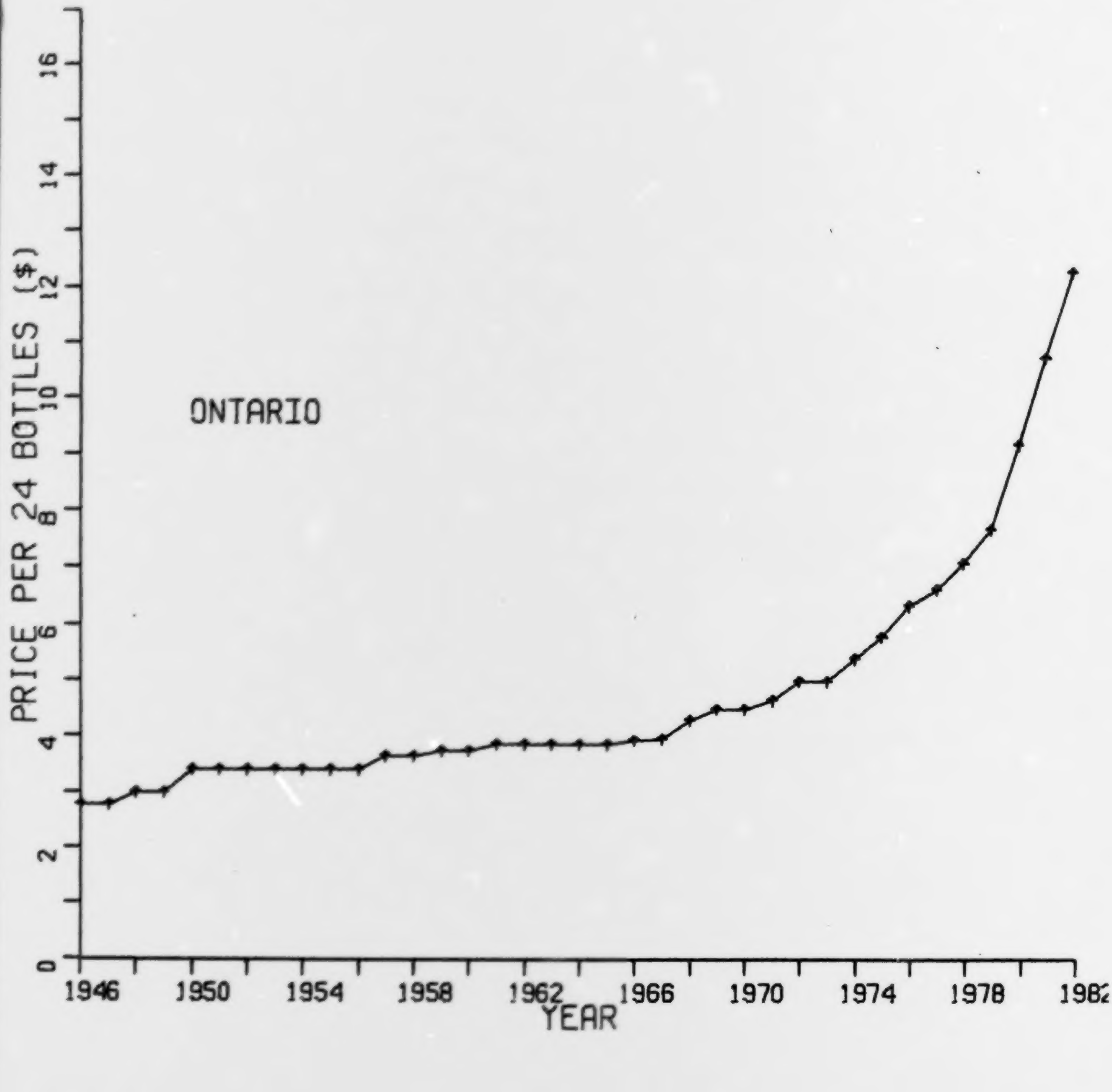


Figure 8A-7: Beer Price Trend

Manitoba

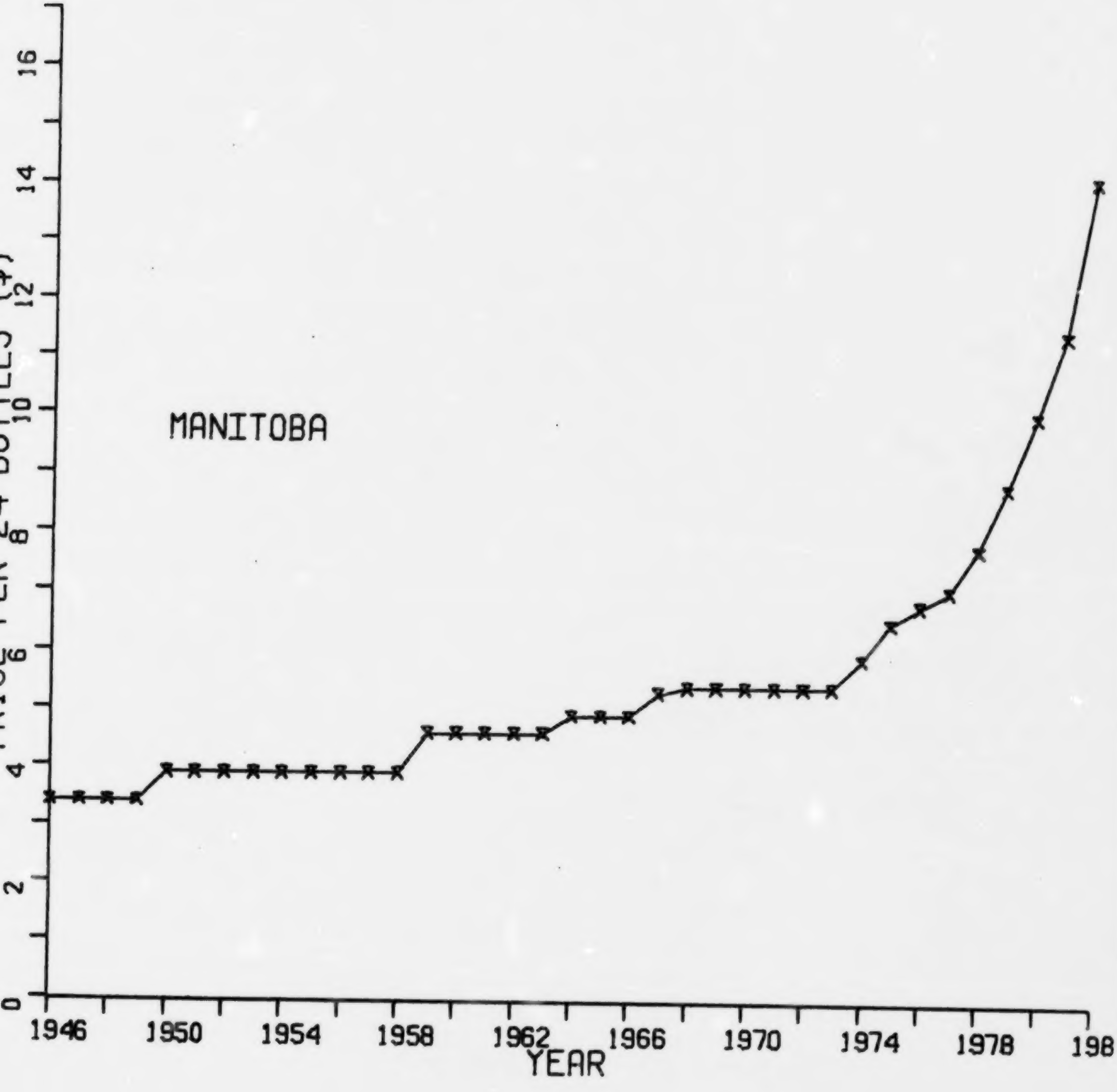


Figure 8A-8: Beer Price Trend

Saskatchewan

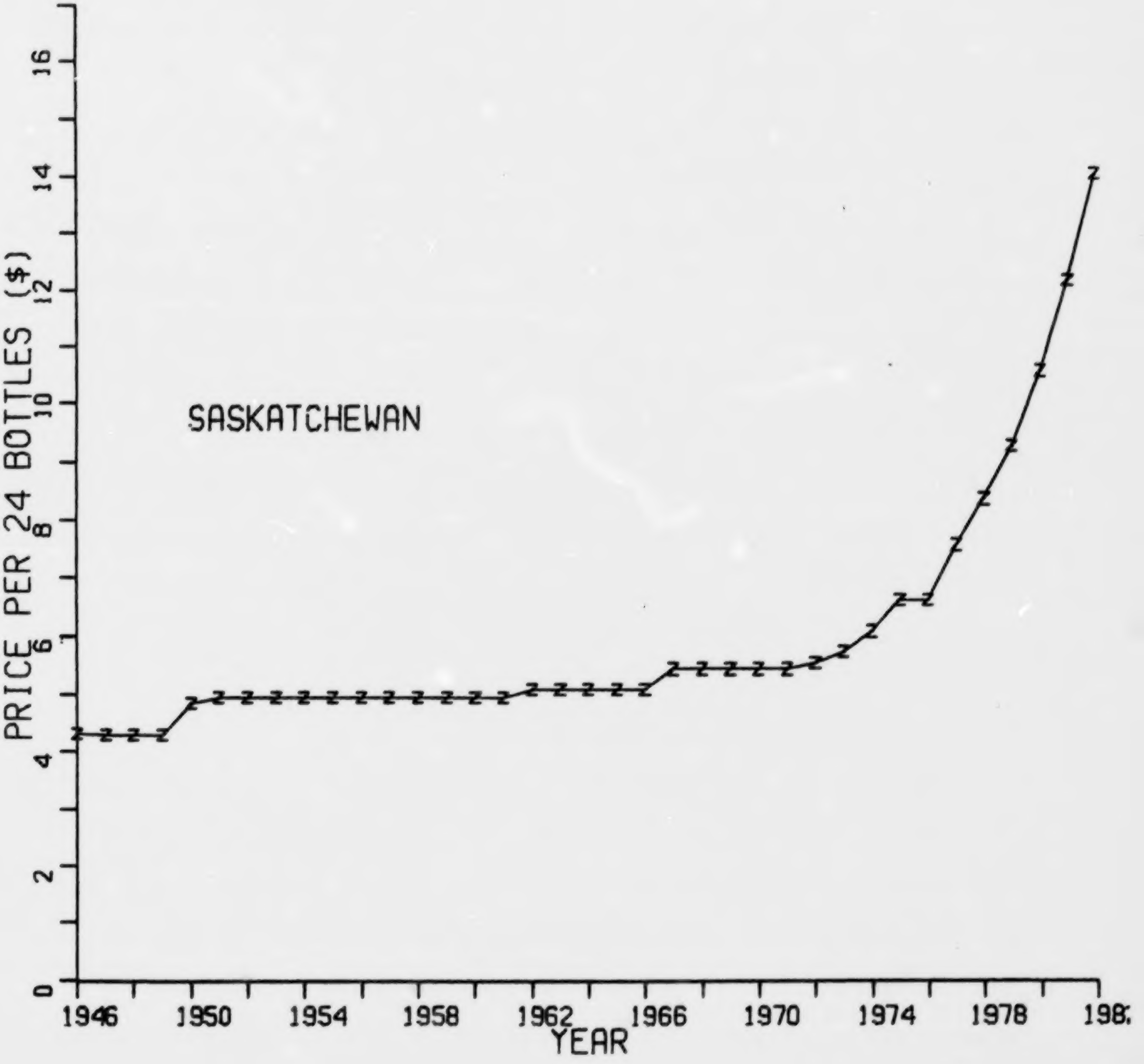
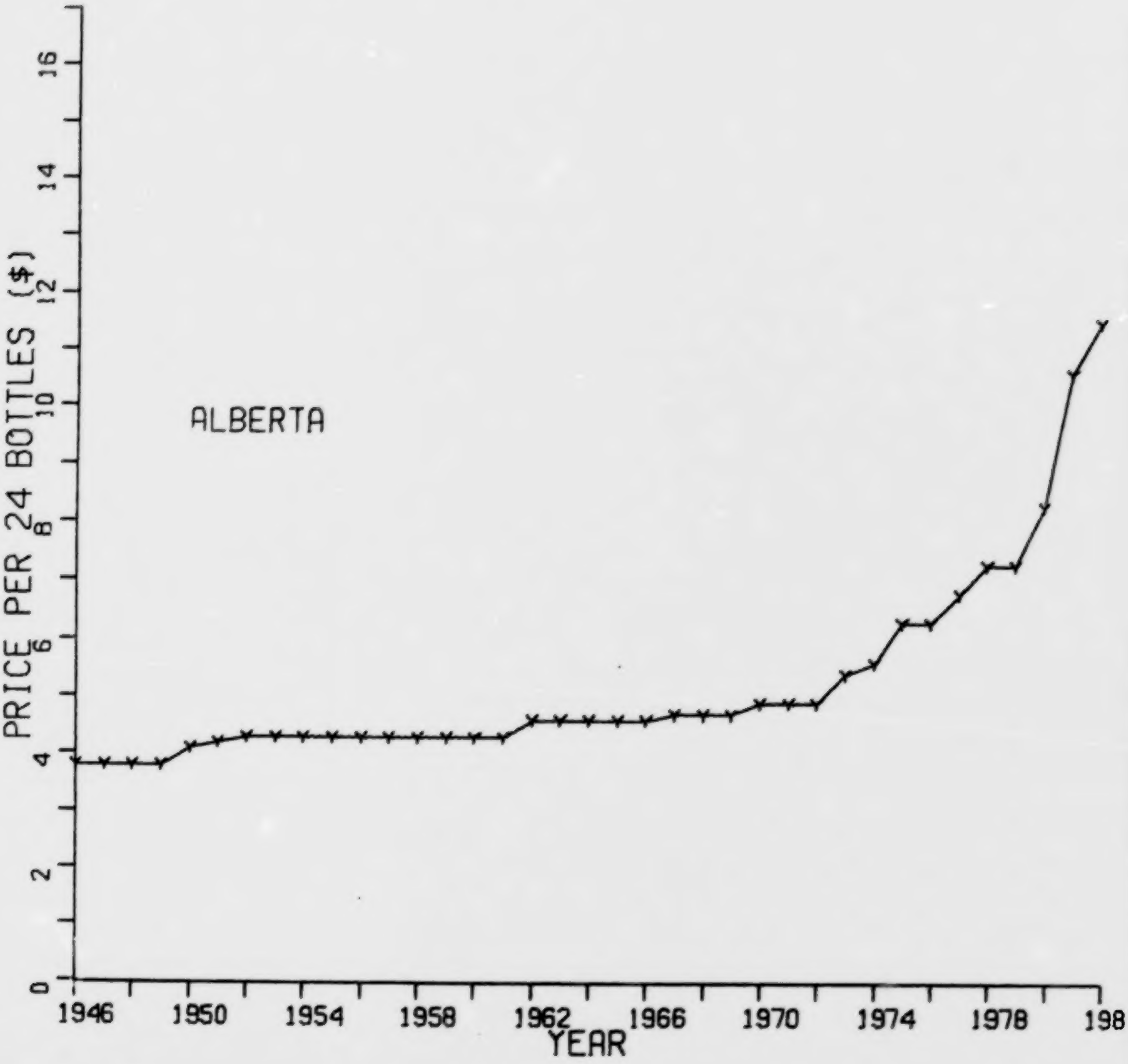


Figure 8A-9: Beer Price Trend

Alberta



Chapter 9

Costs and Profitability in the Brewing Industry

Introduction

In Chapter 8 the trends in beer prices in Canada were analyzed by province and over time. The percentage of beer prices going to governments (both federal and provincial) and to the brewer were also discussed. The brewers' revenue share was found to have remained steady in general, though it has fallen slightly in British Columbia. This provides some evidence that rising beer prices are not leading to monopolistic or oligopolistic profits in brewing. However, a fuller understanding of pricing behaviour necessitates an examination of breweries' costs. This will allow an evaluation of the profitability of the brewing industry in British Columbia, and a comparison with costs and profits in other provinces in Canada. Reviewing the course of costs and profits will improve our ability to assess excess profits that may have been earned as a result of price increases over the past decade. We will also be able to determine the extent to which price increases were justified as a result of changing costs to the brewers.

Overview of Costs

To analyse the cost structure of the brewing industry we have broken costs into production costs, distribution costs, federal taxes, marketing costs, and other costs. Table 9-1 summarizes production and total costs by province for the years 1978-82. Due to a small number of breweries in the Maritimes we have averaged Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick together to protect the confidentiality of individual breweries. Full details of these costs can be found in Appendix Table 9A-1, which contains average costs per hectolitre in each of the cost categories by province, and Table 9A-2, which provides a percentage breakdown by cost category for the provinces.

Table 9-1 reveals several interesting patterns. First, total costs in British Columbia in 1978 were slightly below the national average, but by 1982 total costs per hectolitre were slightly above the national average. Thus, total average costs rose slightly more rapidly in British Columbia than they did nationally. However, when looking at production costs alone, we see that British Columbia experienced average production costs per hectolitre which were nine percent higher than the national average in 1978 but were nearly thirteen percent above average production costs per hectolitre in 1982. With the exception of the high-cost Maritimes, British Columbia showed the highest production costs of any of the remaining provinces for the entire period, and the highest total costs in 1979 and 1982. By 1982 production costs in British Columbia were 21 percent higher than in Quebec and 17 percent higher than in Ontario.

Production costs provide the most consistent comparative measure across provinces and over time, largely because of the similarity of the production processes across Canada. Total cost figures vary considerably, since distribution systems, advertising and promotion regulations, and provincial markups vary dramatically from one province to the next. It is difficult to develop meaningful comparisons for distribution and marketing costs because of variations in the proportion of distribution provided by the provincial governments, and because of differences across provinces in allowed marketing practices. Using average production costs per hectolitre as a basis for comparison, British Columbia brewers can be seen to be under significant cost pressure. Moreover, this cost pressure appears to have increased over the five year period 1978-82.

Further insight on these issues is provided by Tables 9-2 and 9-3. In Table 9-2 we present data on the change in production and total costs per hectolitre using 1978 as a base (1978 = 100). Average production costs have risen more quickly in British Columbia from 1978 to 1982 than for any other province. The B.C. index shows an increase of 53 percent, compared with an increase for the Maritimes of only 37 percent (the lowest). Alberta is closest to B.C., with an increase of 51 percent. Table 9-3 contains the same production cost measure, but with the Canadian average set to 100 to allow comparison of costs across provinces. While for most provinces average cost is very close to the Canadian average (index close to 100), Quebec's costs are substantially lower, and in the Maritimes and British Columbia, costs are consistently higher. The British Columbia and Alberta averages are distorted upward for the strike years, 1979 and 1981, but even in the other years, B.C.'s costs remain above the national average.

Growth rates in production and total costs are calculated in Table 9-4. On average, growth rates in production and total costs have been very close to each other, but there is considerable variation across provinces. Saskatchewan shows the highest growth rate for production costs in 1978-80. Quebec shows the highest growth in total costs for the same period, and the Maritimes the lowest growth rate in both categories. British Columbia saw production costs grow slightly faster, and total costs slightly slower, than the average for Canada. In 1980-82, however, British Columbia shows the highest growth rates for production and total costs, and both rates are well above the Canadian average. Thus, costs have increased rapidly over the past two years in British Columbia.

Some evidence as to the reasons for high production costs in British Columbia are provided in Table 9-5, which shows average wages in the brewing industry by province. Average production wages have been consistently higher than the national average over the period 1971-1981, and were the highest in the nation for all but three years. (In 1974, 1975, and 1980, B.C. was second to Ontario.) For average wages of total brewing industry employees, however, British Columbia generally ranks third or fourth among the provinces, and is very close to the national average. A similar pattern is visible in the (somewhat lower) beverage industry wages shown in brackets in the table. In every year, B.C. has the highest wage levels for both production workers and total workers in the beverage industry. Thus production wages appear to have contributed to British Columbia's production cost disadvantage, though the average wage of all brewing industry employees does not appear to be out of line. High wages in the beverage industry overall indicate that the problem is not unique to brewing.

In summary, production costs are higher in British Columbia than in most provinces, and have been growing faster than in the rest of Canada for the past several years. Rising costs are partly due to the relatively high wages of production workers in the brewing industry. These rapidly-rising costs appear to be largely responsible for the price increases of the past few years.

Brewing Industry Profitability

Information on the profitability of the brewing industry in British Columbia relative to other provinces should also add perspective to the recent price increases in the province. Tables 9-6, 9-7, and 9-8 provide some analysis of profit levels and trends in profit over the past five years. Again, because of the small number of breweries operating in the Maritimes and Newfoundland, these provinces have been aggregated to protect the confidentiality of the information.

Average profit levels by province are shown in Table 9-6. Profit levels for Canada as a whole have remained fairly consistent over the period 1978-1982, but considerable variation across provinces is again evident. While average profit for the nation has varied between 7.1 and 10.6 percent, individual provinces have seen profit levels as low as -18.2 percent and as high as 15.5 percent. Several patterns are notable. Ontario has consistently shown the highest profitability, and Quebec has seen only slightly lower profit levels. The Maritimes show very low but stable profit levels, with the prairie provinces in a similarly stable, though somewhat better, position. Alberta's profitability level also seems good, except for the effect of a lengthy strike in 1981. The profitability of the British Columbia brewing industry was the lowest in the nation for every year except 1982, the first year under open pricing. Even in 1982, profit levels in B.C. were less than half the average for Canada as a whole.

Table 9-7 contains an index of profitability with 1978 = 100. Here the considerable variations in profits over time are apparent. Profits are shown as high as 26 times the 1978 levels, and as low as -2.12 times the 1978 levels for individual provinces. Again, the eastern provinces appear fairly stable, and Alberta and especially British Columbia show considerable variability. (Manitoba's indices are distorted by an abnormally low 1978 profit level.) Again, the effects of strikes are apparent.

Similar index numbers are shown in Table 9-8, but with the Canadian average set to 100. Again, this allows easier comparison across provinces. The stable, high relative profitability of Ontario and Quebec contrasts sharply with the rest of the provinces. Here, too, the very poor relative position of the British Columbia industry is apparent; profit levels have varied from -10 percent to a high of only 44 percent of the average profit level for Canada.

What emerges from this analysis is very clear evidence of the poor profitability of the British Columbia brewing industry. Rapid price increases over the late 1970's and 1980's have not resulted in monopoly profit for the brewers, and the recent open price policy appears to have just allowed the industry to begin to move toward more normal profit levels. The analysis provides no support for assertions of anti-competitive behaviour on the part of British Columbia brewers.

Conclusion

Two final tables have been constructed to facilitate the comparison of costs, prices, and profitability across provinces and over time. Table 9-9 contains indices of average total costs, final beer prices, profit, and consumer prices in general, with 1978=100. Prices have on average grown faster in Canada than have costs (an increase of 69 percent, compared with 51 percent), which have just kept up with the consumer price index (CPI). Profitability, however, fell from 1978-1981 (from an index of 100 to 67), recovering only slightly in 1982 (to 79). Although beer-price/brewery-cost margins have risen, on average, these higher margins are not reflected in average brewery profitability. A similar situation is present in B.C. Prices have risen faster than costs since 1980, but only in 1982 did profitability respond significantly to these changes. This is consistent with the findings in chapter 8 (Table 8-8) that the breweries' share of sales revenue has fallen slightly since 1981.

In Table 9-10, similar indices are given, but with the levels for Canada as a whole set to 100. Prices and costs are nearly always higher for British Columbia than for Canada, with indices for both greater than 100. In 1982 British Columbia's cost and price indices are exceeded only by those for the Maritimes. However, the price index, except for 1979, is higher than the cost index; price exceeds the national average by seven percent in 1982, while costs exceed the national average by only two percent. This pattern of price indices exceeding cost indices is reversed only for Quebec and Ontario, which have prices that are lower but costs that are usually higher than for Canada.

From this table it is apparent that revenue "leakages" between sales revenue and brewery receipts vary considerably across provinces. The provinces with the lowest relative price/cost margins, Ontario and Quebec, have the highest profitability, with profit indices generally well above the national average. Manitoba, with the highest relative price/cost margin, shows a weak profit record. The fairly high margins in British Columbia (except in strike years) again do not translate into high profits; B.C. profit levels are the lowest in the nation except for the Maritimes in 1982. Since federal taxes are constant across all provinces, provincial revenue shares must account for the difference. Part of these differences are due to variations in the portion of distribution undertaken by the provinces; the remainder is due to differences in effective taxes.

The analysis of cost and profitability in this chapter have shown that production costs are higher in British Columbia than in all other provinces except the Maritimes, in part due to high labour costs. These high and rapidly rising costs appear largely responsible for recent beer price increases. Though prices have risen slightly faster than costs over the past five years, these higher prices have not resulted in large profits for the brewing industry. British Columbia had the least profitable brewing industry in Canada in 1978-1981. The implementation of open pricing in 1981 has improved brewery profitability in the province to about half the average for the nation.

In Chapter 10, the structure of the brewing industry in British Columbia is analyzed and compared with that for Canada as a whole. Chapter 11, the final chapter of this section, contains an analysis of the constraints on the industry. These two sets of information will complete our analysis and, together with the price, cost, and profitability findings, will provide the basis for our recommendations in Part Three of this report.

TABLE 9-1

Average Cost Per Hectolitre ($)

Year Province	1982		1981		1980		1979		1978	
	P	T	P	T	P	T	P	T	P	T
Maritimes	37.74	87.51	33.06	75.17	30.12	67.02	28.68	63.42	27.48	61.49
Quebec	23.39	84.40	20.38	73.12	18.31	63.40	16.08	56.81	15.76	53.43
Ontario	24.24	84.03	21.89	75.18	18.86	65.25	17.15	59.66	16.32	57.14
Manitoba	24.43	71.43	22.21	62.84	19.51	55.96	18.11	54.79	16.97	49.29
Saskatchwan	23.47	78.62	22.40	68.14	20.25	61.53	18.38	56.76	16.90	53.10
Alberta	24.28	79.24	24.03	86.69	19.18	60.48	16.48	56.37	16.08	52.08
British Columbia	28.40	84.83	26.24	75.84	21.79	62.24	21.32	66.07	18.52	54.44
Canada	25.20	83.30	22.67	74.29	19.75	63.54	17.82	58.91	17.01	55.01

Note: P - Production Costs
T - Total Costs

Source: Confidential data supplied by breweries. See Appendix Tables 9A-1 and 9A-2 for details.

TABLE 9-2

BREWING INDUSTRY: AVERAGE PRODUCTION COST INDEX (1978 = 100)

YEAR PROVINCE	1982	1981	1980	1979	1978
MARITIMES	137	120	110	104	100
QUEBEC	148	129	116	102	100
ONTARIO	149	134	116	105	100
MANITOBA	144	131	115	107	100
SASKATCHEWAN	139	133	120	109	100
ALBERTA	151	149	119	102	100
BRITISH COLUMBIA	153	142	118	115	100
CANADA	148	133	116	105	100

NOTE: 1981 and 1979 were strike years in Alberta and British Columbia.

SOURCE: Confidential data supplied by breweries. See Appendix Tables 9A-1 and 9A-2 for detail.

TABLE 9-3

BREWING INDUSTRY: AVERAGE PRODUCTION COST INDEX (CANADA = 100)

YEAR PROVINCE	1982	1981	1980	1979	1978
MARITIMES	150	146	153	161	162
QUEBEC	93	90	93	90	93
ONTARIO	96	97	95	96	96
MANITOBA	97	98	99	102	100
SASKATCHEWAN	93	99	103	103	99
ALBERTA	96	106	97	92	95
BRITISH COLUMBIA	113	116	110	120	109
CANADA	100	100	100	100	100

NOTE: 1981 and 1979 were strike years in Alberta and British Columbia.

SOURCE: Confidential data supplied by breweries. See Appendix Tables 9A-1 and 9A-2 for detail.

TABLE 9-4

ANNUAL GROWTH RATES OF AVERAGE COST (PERCENT)

YEAR	1978-1980		1980-1982		AVERAGE 1978-1982	
PROVINCE	P	T	P	T	P	T
MARITIMES	4.69	4.40	11.94	14.27	8.25	9.22
QUEBEC	7.79	8.93	13.02	15.38	10.37	12.11
ONTARIO	7.50	6.86	13.37	13.48	10.40	10.12
MANITOBA	7.22	6.55	11.90	12.98	9.54	9.72
SASKATCHEWAN	9.46	7.65	7.66	13.04	8.56	10.31
ALBERTA	9.21	7.76	12.51	14.46	10.85	11.06
BRITISH COLUMBIA	8.47	6.92	14.16	16.75	11.28	11.73
CANADA	7.75	7.47	12.96	14.50	10.33	10.93

NOTE: P - Production Cost
T - Total Cost

SOURCE: Confidential data supplied by breweries. See Appendix Tables 9A-1 and 9A-2 for detail.

TABLE 9-5

Average Wages in the Brewing Industry By Province
(1971-1981)
(Comparable figures of the Food and Beverage Industry are in brackets)

YEAR	1981		1980		1979		1978		1977		1976		1975		1974		1973		1972		1971	
PROVINCE	AP	AT	AP	AT	AP	AT	AP	AT	AP	AT	AP	AT	AP	AT	AP	AT	AP	AT	AP	AT	AP	A
QUEBEC	12.31 (NA)	12.55 (NA)	10.89 7.23	11.33 8.02	9.84 (6.46)	9.77 (7.21)	8.94 (5.91)	8.99 (6.57)	8.17 (5.53)	8.34 (6.10)	7.83 (5.13)	7.95 (5.65)	6.78 (4.53)	6.88 (4.95)	5.80 (3.81)	5.61 (4.28)	4.63 (3.25)	5.09 3.67)	4.49 (2.90)	4.88 (3.35)	4.50 (2.68)	4. (3.
ONTARIO	12.67 (NA)	13.58 (NA)	11.49 7.58	12.71 8.32	10.02 (6.94)	10.96 (7.61)	8.97 (6.36)	9.96 (6.97)	8.44 (5.98)	9.13 (6.52)	7.67 (5.40)	8.50 (6.02)	7.21 (4.71)	7.88 (5.22)	6.18 (4.12)	6.88 (4.59)	5.36 (3.65)	5.95 (4.13)	4.94 (3.34)	5.50 (3.81)	4.52 (3.10)	4. (3.
MANITOBA	11.44 (NA)	12.00 (NA)	10.39 7.58	10.95 7.83	9.44 (6.85)	9.76 (7.12)	8.60 (6.26)	8.77 (6.37)	8.12 (5.95)	8.45 (6.15)	7.17 (5.49)	7.28 (5.68)	6.53 (4.82)	6.51 (5.03)	5.90 (4.23)	5.65 (4.40)	5.33 (3.68)	4.99 (3.87)	5.19 (3.32)	4.71 (3.53)	4.55 (3.06)	4. (3.
SASKATCHEWAN	11.59 (NA)	13.15 (NA)	10.66 7.76	11.72 8.35	9.47 (7.38)	10.56 (7.95)	8.75 (6.74)	9.83 (7.20)	7.91 (6.47)	8.65 (6.77)	7.17 (5.74)	7.69 (6.16)	6.41 (4.97)	6.98 (5.19)	5.91 (4.24)	6.19 (4.33)	4.88 (3.62)	5.19 (3.74)	4.66 (3.34)	4.97 (3.52)	4.40 (3.17)	4. (3.
ALBERTA	11.36 (NA)	12.09 (NA)	11.09 8.43	12.00 8.67	10.18 (7.59)	10.59 (7.85)	8.82 (6.88)	9.43 (7.04)	8.14 (6.40)	8.67 (6.61)	7.75 (5.81)	8.22 (5.99)	6.49 (5.19)	6.88 (5.38)	5.75 (4.44)	5.76 (4.54)	5.17 (3.89)	5.32 (4.06)	4.77 (3.58)	4.88 (3.81)	4.44 (3.30)	4. (3.
BRITISH COLUMBIA	12.84 (NA)	12.43 (NA)	11.18 8.99	11.37 9.24	10.49 (8.26)	10.81 (8.49)	8.98 (7.52)	8.95 (7.68)	8.58 (7.05)	8.50 (7.18)	7.92 (6.43)	8.01 (6.59)	7.14 (5.62)	6.97 (5.78)	5.91 (4.89)	5.88 (4.91)	5.58 (4.12)	5.58 (4.14)	5.30 (3.65)	5.00 (3.82)	4.80 (3.36)	4. (3.
CANADA	12.26 (NA)	14.38 (NA)	11.06 7.37	11.73 8.04	9.89 (6.66)	10.26 (7.31)	8.84 (6.10)	9.25 (6.65)	8.22 (5.73)	8.61 (6.23)	7.63 (5.23)	8.04 (5.75)	6.81 (4.59)	7.12 (5.04)	5.89 (3.96)	6.03 (4.35)	5.04 (3.41)	5.38 (3.79)	4.76 (3.09)	5.00 (3.48)	4.46 (2.84)	4. (3.

Note: AP - Average hourly wages of production employees
AT - Average hourly wages of total employees (estimated, based on 52 40-hour weeks per employee)
- Data for Newfoundland, Nova Scotia, and New Brunswick are not available.
- No production in Prince Edward Island, Yukon and Northwest Territories.
NA - Not available

Source: Statistics Canada, 32-203 and 32-205, 1971-1982.

TABLE 9-6

BREWING INDUSTRY: AVERAGE PRE-TAX PROFIT BY PROVINCE (PERCENT) (1987-1982)

YEAR PROVINCE	1982	1981	1980	1979	1978
MARITIMES	0.1%	2.2%	2.1%	0.5%	2.5%
QUEBEC	7.9	8.9	8.9	12.6	12.2
ONTARIO	11.8	10.8	9.4	14.5	15.5
MANITOBA	3.1	3.5	5.2	(0.1)	0.2
SASKATCHEWAN	4.3	7.2	3.3	5.9	6.5
ALBERTA	10.7	(18.2)	8.5	5.5	8.6
BRITISH COLUMBIA	3.7	(0.3)	1.6	(1.0)	1.0
CANADA	8.4	7.1	7.5	10.3	10.6

NOTE: 1981 and 1979 were strike years in Alberta and British Columbia. Pre-tax profit was calculated as average revenue net of provincial taxes (or markup) less average total cost (from Table 9-1) divided by average revenue net of provincial taxes. This measure may not give results consistent with other methods, but is consistent across provinces. ( ) indicates negative values

SOURCE: Confidential data supplied by breweries.

TABLE 9-7

BREWING INDUSTRY: AVERAGE PRE-TAX PROFIT INDEX (1978 = 100)

YEAR PROVINCE	1982	1981	1980	1979	1978
MARITIMES	4	88	84	(20)	100
QUEBEC	65	73	73	103	100
ONTARIO	76	70	61	94	100
MANITOBA	1550	1750	2600	(50)	100
SASKATCHEWAN	66	111	51	91	100
ALBERTA	124	(212)	99	63	100
BRITISH COLUMBIA	370	(30)	160	(100)	100
CANADA	79	67	71	74	100

NOTE: 1981 and 1979 were strike years in Alberta and British Columbia. ( ) indicates negative values. Manitoba values are distorted by an extremely low 1978 value (see Table 9-6).

SOURCE: Confidential data supplied by breweries.

TABLE 9-8

BREWING INDUSTRY: AVERAGE PRE-TAX PROFIT INDEX
(CANADA = 100)

YEAR PROVINCE	1982	1981	1980	1979	1978
MARITIMES	1	31	28	5	24
QUEBEC	94	125	119	122	115
ONTARIO	140	152	125	141	146
MANITOBA	37	49	69	(1)	2
SASKATCHEWAN	51	101	44	57	61
ALBERTA	127	(256)	113	53	81
BRITISH COLUMBIA	44	(4)	21	(10)	9
CANADA	100	100	100	100	100

NOTE: 1981 and 1979 were strike years in Alberta and British Columbia. ( ) indicates negative values.

SOURCE: Confidential data supplied by the breweries.

TABLE 9-9

COMPARISON OF COSTS, PRICES, PROFITS OVER TIME
(1978 = 100)

PROVINCE	1982				1981				1980				1979				1978			
	C	P[c]	a	CPI[e]	C	P	a	CPI	C	P	a	CPI	C	P	a	CPI	C	P	a	CPI
Maritimes	142	167[b]	4	151[b]	122	146[b]	88	136[b]	109	124[b]	84	121[b]	103	107[b]	(20)	109[b]	100	100[b]	100	100[b]
Quebec	158	164	65	152	137	150	73	135	119	125	73	120	106	105	103	109	100	100	100	100
Ontario	147	173	76	152	132	151	70	135	114	130	61	120	104	108	94	109	100	100	100	100
Manitoba	145	182	1550	146	127	147	1730	133	114	129	2600	120	111	114	(50)	109	100	100	100	100
Saskatchewan	148	168	66	146	128	145	111	133	116	126	51	119	107	111	91	108	100	100	100	100
Alberta	152	158	124	151	166	145	(212)[a]	135	116	114	99	120	108	100	63[a]	109	100	100	100	100
British Columbia	156	169	370	150	139	155	(30)[a]	135	114	125	160	118	121	108	(100)[a]	108	100	100	100	100
CANADA	151	169[d]	79	151	135	149[d]	67	135	116	125[d]	71	120	107	107[d]	74	109	100	100[d]	100	100

C: Average total cost per hectolitre (1978 = 100)
P: Price per two dozen bottles of regular beer (1978 = 100)
a: Average profit per hectolitre/Average revenue
CPI: Consumer price index (1978 = 100)
a) Strike year
b) Simple average over Newfoundland, New Brunswick, Nova Scotia, Prince Edward Island
c) Prices for 1982 are for January-September. Alberta is for January-March
d) Simple average over the Maritimes, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and B.C.
e) July 1982
(Negative values in parentheses)
SOURCE: Statistics Canada; Confidential data supplied by breweries; Brewers Association of Canada

TABLE 9-10

Comparison of Costs, Prices, Profits, Overtime
(1978 = 100)

	1982			1981			1980			1979			1978		
PROVINCE	C	P[c]	a	C	P	a	C	P	a	C	P	a	C	P	a
Maritimes	105	113[b]	1	101	112[b]	31	105	113[b]	28	108	113[b]	5	112	114[b]	24
Quebec	101	93	94	98	97	125	100	97	119	96	93	122	97	96	115
Ontario	101	92	140	101	91	152	103	93	125	101	90	141	104	89	146
Manitoba	86	105	37	85	96	49	88	101	69	93	103	(1)	90	97	2
Saskatchewan	94	105	51	92	103	101	97	107	44	96	109	57	97	105	61
Alberta	95	86[c]	127	117	90	(256)[a]	95	84	113	96	85	53[a]	95	92	81
British Columbia	102	107	44	102	111	(4)[a]	98	107	21	112	107	(10)[a]	99	107	9
CANADA	100	100[d]	100	100	100[d]	100	100	100[d]	100	100	100[d]	100	100	100[d]	100

C: Average total cost per hectolitre (Canada = 100)
P: Price per two dozen bottles of regular beer (Canada = 100)
a: Average profit per hectolitre/Average revenue (Canada = 100)
a) Strike year
b) Simple average over Newfoundland, New Brunswick, Nova Scotia, Prince Edward Island
c) Prices for 1982 are for January-September. Alberta is for January-March
d) Simple average over the Maritimes, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and B.C.
(Negative values in parentheses.)

SOURCE: Statistics Canada; Confidential data supplied by brewers; Brewers Association of Canada

APPENDIX: CHAPTER 9

Table 9A - 1
Average Cost per Hectolitre
(1978 - 1982)

Province/Year	Production	Distribution	Marketing	Federal Taxes	Other Costs	Total Cost	Production (000 h/1)
Maritimes							
1982	$ 37.74	$8.81	$6.29	$ 20.85	$ 13.82	$ 87.54	1152
1981	33.06	8.22	4.96	18.99	9.94	75.17	1173
1980	30.12	7.72	4.49	15.69	9.02	67.02	1123
1979	28.68	7.26	3.78	15.22	8.48	63.42	1089
1978	27.48	7.40	3.44	15.28	7.89	61.49	1023
Quebec							
1982	23.39	13.48	12.70	20.69	14.13	84.40	6074
1981	20.37	11.70	10.88	18.65	11.51	73.12	6053
1980	18.31	10.25	9.45	15.75	9.64	63.40	6201
1979	16.08	9.03	7.74	15.35	8.60	56.81	6121
1978	15.76	8.54	6.22	15.16	7.75	53.42	6073
Ontario							
1982	24.24	18.25	9.39	20.89	11.26	84.03	7574
1981	21.89	16.65	8.17	19.00	9.46	75.18	7441
1980	18.86	15.25	7.15	15.31	8.68	65.25	7361
1979	17.15	13.85	6.52	14.28	7.86	59.66	7310
1978	16.32	13.24	5.30	14.04	8.24	57.14	6869
Manitoba							
1982	24.43	10.64	5.87	18.93	11.58	71.43	829
1981	22.21	9.41	4.72	17.14	9.36	62.84	851
1980	19.51	8.88	4.14	14.50	8.91	55.96	822
1979	18.11	8.78	4.23	14.02	9.65	54.79	698
1978	16.97	7.72	3.27	13.20	8.12	49.29	836

continued on next page

Table 9A - 1 cont'd.
Average Cost per Hectolitre
(1978 - 1982)

Province/Year	Production	Distribution	Marketing	Federal Taxes	Other Costs	Total Cost	Production (000 h/1)
Saskatchewan							
1982	$ 23.47	$7.53	$7.22	$ 20.26	$ 20.14	$ 78.62	682
1981	22.40	6.81	5.81	18.47	14.65	68.14	745
1980	20.25	5.88	5.40	15.13	14.88	61.53	690
1979	18.38	5.21	4.84	14.90	13.43	56.76	684
1978	16.90	4.92	4.52	14.58	12.18	53.01	637
Alberta							
1982	24.28	11.58	7.50	20.76	15.11	79.24	1865
1981	24.03	13.16	11.71	18.48	19.30	86.68	858
1980	19.18	9.65	5.62	15.44	10.60	60.48	1644
1979	16.48	9.18	4.79	14.72	11.21	56.37	1449
1978	16.07	8.41	3.84	14.56	9.19	52.08	1534
British Columbia							
1982	28.40	16.13	5.61	20.87	13.82	84.83	2280
1981	26.24	13.87	5.23	18.60	11.91	75.84	1936
1980	21.79	12.35	3.85	14.98	9.28	62.24	2289
1979	21.32	13.17	4.92	14.61	12.05	66.07	1448
1978	18.52	10.22	3.08	14.90	7.72	54.44	2121
CANADA							
1982	25.20	14.79	9.39	20.71	13.20	83.29	20456
1981	22.67	13.41	8.45	18.72	11.03	74.28	19057
1980	19.75	11.92	7.03	15.40	9.44	63.54	20130
1979	17.82	10.98	6.36	14.76	8.99	58.90	18799
1978	17.01	10.19	5.01	14.58	8.21	55.00	19093

Source: Confidential data supplied by breweries

Table 9A - 2
AVERAGE COST PER HECTOLITER
(Percent Distribution)

Maritimes	1982	1981	1980	1979	1978
Production	43	44	45	45	45
Distribution	10	11	12	12	12
Federal Tax	24	25	23	24	25
Marketing	7	7	7	6	5
Other	16	13	13	13	3
Total	100	100	100	100	100
Quebec					
Production	28	28	29	28	29
Distribution	16	16	16	16	16
Federal Tax	25	25	25	27	28
Marketing	15	15	15	14	12
Other	16	16	15	15	15
Total	100	100	100	100	100
Ontario					
Production	29	29	29	29	29
Distribution	22	22	23	23	23
Federal Tax	25	25	24	24	25
Marketing	11	11	11	11	9
Other	13	13	13	13	14
Total	100	100	100	100	100
Manitoba					
Production	34	35	35	33	34
Distribution	15	15	16	16	16
Federal Tax	27	27	26	25	27
Marketing	8	8	7	8	7
Other	16	15	16	18	16
Total	100	100	100	100	100
Saskatchewan					
Production	30	33	33	32	32
Distribution	9	10	9	9	9
Federal Tax	26	27	25	26	27
Marketing	9	8	9	9	9
Other	26	22	24	24	23
Total	100	100	100	100	100

Table 9A - 2, cont'd.
AVERAGE COST PER HECTOLITER
(Percent Distribution)

Alberta	1982	1981	1980	1979	1978
Production	31	28	32	29	31
Distribution	15	15	16	16	16
Federal Tax	26	21	26	25	28
Marketing	9	14	9	8	7
Other	19	22	17	20	18
Total	100	100	100	100	100
British Columbia					
Production	33	35	35	32	34
Distribution	19	18	20	20	19
Federal Tax	25	24	24	22	27
Marketing	7	7	6	8	6
Other	16	16	15	18	14
Total	100	100	100	100	100
Canada					
Production	30	31	31	30	31
Distribution	18	18	19	19	18
Federal Tax	25	25	24	25	27
Marketing	11	11	11	11	9
Other	16	15	15	15	15
Total	100	100	100	100	100

Chapter 10

Brewing Industry Structure: Market Share, Plant Size and Competition

Introduction

Our analysis so far has shown that prices have risen dramatically over the past decade; costs, too, have increased, particularly labour costs and provincial government revenues. As a result it appears that price increases can be justified, for the most part, by the costs incurred by the brewing industry over the past ten years. However, we have not yet explored the possibility that the breweries can exert market power, defined as the ability to raise prices in excess of costs. When there are a small number of sellers and large numbers of buyers in an industry, market power is likely to exist. These conditions are present in the brewing industry; the three national breweries dominate the national market with 97 percent of domestic beer market sales. Thus a very small number of sellers face, in most instances, a large number of buyers -- the licensed establishments and the general public. Whether or not such market power is exercised is a separate question, which will be discussed at the end of this chapter. Initially, we review the data available on market share and plant size to assess concentration in the brewing industry in Canada and in British Columbia. Given this data analysis and our previous analysis of prices and costs, the existence and extent of market power, and its impact on the price of beer, will be assessed.

Market Share: An Analysis of Sales Over Time, Across Provinces, and By Brand

Trends in national market share over time are shown in Table 10-1. Here we see that the national brewing companies clearly dominate the beer market in

Canada. Labatt leads the market with a share of 37.6 percent in the first half of 1982, followed closely by Molson with a 36.7 percent market share, and then Carling-O'Keefe with 22.8 percent. The market share of the independent breweries and imports has fallen steadily over the past two decades, from seven percent in 1960 to only three percent in 1982, indicating that the three major breweries have increased their market dominance. Moreover, this table points out the competitiveness of the total beer market; market share has not remained stable over the two decades. Labatt started in 1960 in third place, with a market share of 17.2 percent, and rose to take the number one spot in 1970 with a 32.0 percent market share. In 1978 their share had increased to 3t remained stable over the two decades. Labatt started in 1960 in third place, with a market share of 17.2 percen60, indeed as the overwhelmingly dominant force in th brewing industry, with a 49.1 percent market share. By 1970 it had slipped into second place, overtaken by Labatt, and by 1973, had slipped into third place where it has remained. In 1981 Carling had a 23.5 percent share, less than half its market share of 21 years earlier.

To put the growing concentration of the Canadian brewing industry into perspective, comparison with the United States industry is useful, as seen in Table 10-2. The three-firm concentration ratio (the percentage of the market share held by the three largest firms) has risen in Canada from 93 percent in 1970 to 97 percent in 1981, with small increases estimated for 1982. Meanwhile, the analogous ratio in the United States has almost doubled, climbing from 34.3 percent in 1970 to 60.6 percent in 1981. Thus, while the brewing industry is considerably more concentrated in Canada than in the United States, the U.S. brewing industry is clearly headed in the same direction. Evidence from both the United Kingdom and West Germany is also consistent with this growing level of concentration in brewing.

The field of industrial organization is the branch of economics concerned with industry structure, competition and market power. While no rigourously defined standards for market power have been defined, researchers in industrial organization have developed rough rules of thumb relating concentration ratios to the probable existence of market power. First, a four firm concentration ratio of more than 75 percent is likely to be indicative of the possible existence of market power. Second, a ten firm concentration ratio (the market share of the ten largest firms in an industry) of more than 90 percent is likely to be indicative of market power.

Using either rule, it is clear that the potential for market power exists in Canada, since the three firm concentration ratio in the national market exceeds 97 percent. In the United States, the four largest breweries are approaching a 75 percent market share. The recent merger of Stroh's Brewing Company of Detroit with Joseph Schlitz and Company brings the four firm ratio to just below 75 percent. The ten firm concentration ratio, however, has risen to over 95 percent in 1981 from a level of 87 percent in 1977 as a result of considerable recent merger activity in the United States. Thus, the ten firm rule implies that there is the possibility of market power in the U.S. brewing industry. Moreover, in light of recent merger activity, the four firm concentration ratio is also likely to rise to the 75 percent level. Thus, concentration in the U.S. is also approaching the level where the exercise of market power is likely.

From the data we have analyzed, there is no evidence of the exercise of market power in Canada. First, even though beer prices have risen rapidly over the past decade, the portion going to brewers has remained constant or fallen slightly. Second, profit figures do not indicate abnormal or monopoly profits in the industry in general, and certainly not in British Columbia. Third, the breweries must compete in separate markets in each of the ten provinces, unlike the U.S., so national measures of market share may not accurately reflect market power.

In the 1980-1981 fiscal year, market shares varied tremendously from one province to the next, as seen in Table 10-3. No clear spacial pattern is visible. Market shares have fluctuated considerably at the national level, and these swings in market share will likely be even more marked at the provincial level as firms compete to build market share in each provincial market. Evidence from British Columbia supports this point. The respective shares of the national brewers in the province fluctuated considerably between 1970 and 1981, showing the same kind of jockeying for position as seen at the national level. However, the positions of the brewers often differ from their national market shares. Table 10-4 also indicates that Carling-O'Keefe's market position has improved over the past three years in British Columbia, to the point where it is almost tied with Molson for second place. This is in contrast to its declining national performance. Labatt's market share increased from 1970-1977, but has fallen since then, though it has led the market throughout the period. Molson's market share has risen steadily since 1976.

Our analysis of market shares in Canada and in British Columbia indicate the presence of some competitive pressures, as did the price movements discussed in Chapter 8. In British Columbia, particularly in the past 19 months, there has been substantial price movement and increased price dispersion. Clear market segments are emerging and the breweries are obviously pricing competitively to win market share. However, major shifts in market shares were apparent during the 1970's, even in the absence of price competition. Given this new competitive instrument we anticipate further variability in market share. Market share and price movement combine to lead us to conclude that competition is at work in the brewing industry in British Columbia, and that considerable potential exists for further competition.[1]

Lastly, table 10-5 sets out estimates of market share of major brands by brewer as a percentage of the total Canadian market for early 1982. Not surprisingly, the four dominant brands belong to Molson and Labatt, the industry leaders. These national averages, however, mask enormous provincial variations in brand shares. For example, in British Columbia, the market leader is Molson Canadian, with a large margin over Labatt Blue, the market leader just several years previously. Thus, brand market shares have shifted much like brewery market shares. While total beer consumption may not be growing, as elaborated in Chapter 11, there appears to be significant competition within this relatively static market.

Market Structure: Analysis of Plant Sizes over Time

Aggregate measures such as sales by brewing companies have been used thus far in analyzing the structure of the brewing industry, with the finding that market concentration has increased over time, with three companies dominating the market. Similar trends are apparent in the number and scale of individual brewery plants.

Tables 10-6 through 10-8 contain data on the number and size of plants over time, with size measured in three different ways: listed brewing capacity, value of production, and number of employees. Independent of the measure of size we see two trends: decreasing numbers of plants, and increasing scale of plants. Table 10-6A shows that in 1957 there were 55 plants in Canada, with no plant exceeding more than 2,000,000 barrels of capacity. At that time there were only two plants with more than 1,000,000 barrels of capacity. Moreover, there were 35 plants, 65 of the total number, with less than 150,000 barrels of capacity. In contrast, in 1981 there were 2 plants with more than 2,000,000 barrels of capacity and 8 breweries with more than 1,000,000 barrels of capacity. This increase in the number of large plants was matched by the dramatic decrease in the number of small plants. By 1981 there were only nine, 22 percent of the total number of plants, with less than 150,000 barrels of capacity. The most common plant size has steadily increased from the 26,000-30,000 barrel range in 1957 (with 11 such plants), to the 251,000-500,000 barrels range by 1981 (again with 11 such plants). Finally, the number of breweries fell to 41 in 1981 from the 55 operating in 1957.

United States brewing plants have seen an even more dramatic trend as seen in Table 10-6B. From 1959 to 1979, the number of operating plants fell from 203 to 75, while plant sizes grew steadily larger. Two plants with 4,000,000 barrels or greater capacity were operating in 1959; twenty such plants were operating in 1979. Meanwhile the number of plants with 250,000 barrels or less capacity fell from 109, or 54 percent of the total number of plants, to sixteen, or 21 percent of the total. It is likely that the dispersed Canadian population and the restrictions on interprovincial beer sales have prevented brewing plants from becoming as large as in the U.S. Similar trends, however, are visible in both countries.

Measuring plant size by value of production, we also see a decline in the number of breweries and a steady increase in their scale of output from 1926-1966. In 1931 there were only eleven plants producing more than $1,000,000 of output per year and 69 were producing less than this level. By 1966, only eight plants remained with less than $1,000,000 of annual production while 44 plants exceeded this level. These data reflect in part the post-World War II inflationary pressures, as well as the dramatic increases in scale since the war.

In Table 10-8, the distribution of plants according to the numbers of people employed, the same trends are evident. In 1931 there were only five plants that employed more than 200 people, while 51 plants employed fewer than 50 (over 60% of the plants). By 1980 only nine plants employed less than 50 people, and 14 employed more than 200. These data mask the technological changes in the industry which affected the labour-intensity of production. In particular, labour-saving machinery in the packaging process has affected brewery employment. Thus, while plant sizes by value of output overstate scale because of inflation, the present data on employment understate the scale of plants because of technological change resulting in increased output per worker. All measures of output point to fewer, larger-scale plants over time.

Discussion and Conclusions

The brewing industry is highly concentrated and is increasingly dominated, not just by large brewing companies, but also by large plants. The Canadian situation is not unique. British Columbia has demonstrated the same characteristics as has the national brewing industry; only five plants and four breweries are currently in operation, and the market is dominated by three national firms. In a broader world perspective, the same trends toward growing market concentration and larger brewing plants are evident in the United States,[2] the United Kingdom[3] and Germany.[4]

The evolution of the U.S. and U.K. industries have attracted the greatest attention. In the U.S. studies were undertaken because of fear of monopolistic and antitrust practices; in the U.K. there was also antitrust concern, but studies were undertaken as well because of the cultural importance of beer the fear that increasing concentration would result in the loss of diverse local breweries. Abstracts of much of the brewing industry literature can be found in

Appendix II to this report, which provides an annotated bibliography on beer and the brewing industry in Canada and elsewhere.

From the evidence provided by these studies, growing concentration in the brewing industry is largely attributable to the existence of significant scale economies and mergers. In Chapter 2 we noted that Canadian Breweries Ltd. grew by merger and acquisition, as, to a more limited extent, did Molson and Labatt. Smaller, less efficient breweries have been closed in favour of the expansion or new construction of larger facilities. Similar behaviour is evident in the United States and the United Kingdom.

While merger and acquisition behaviour is important, it does not explain why large plants have come to dominate the industry; for this we turn to a discussion of economies of scale. Economies of scale are said to exist if the cost of producing a unit of output declines with larger scale production. Economies of scale appear in two aspects of the brewing industry: production and marketing. In production, evidence that plant sizes are growing larger over time is consistent with the existence of economies of scale.[5] In addition, cost studies conducted by breweries, largely from an engineering viewpoint, claim the existence of such economies. Intuition would also support the existence of scale economies. Very large volumes of output are needed to keep the enormously expensive bottling and canning equipment, which processes up to 1200 bottles or 2000 cans per minute, fully employed.[6]

Brewing and warehousing costs also appear to decline with scale, and capital costs appear lower for large-scale operations.[7] Finally, there is evidence that marketing costs decline with volume. Given the enormously important role of marketing in the brewing industry, scale economies in marketing are highly significant.[8]

Studies of the U.S. and U. K. brewing industries are ultimately of limited usefulness in evaluating the Canadian brewing industry directly. First, in the U.S. there is a much larger market (ten times that of Canada), and there are no barriers to selling beer outside the state in which it is produced. In Canada beer must be produced in the province where it is sold. In the United Kingdom, the existence of "tied houses", where breweries own their own retail outlets such as hotels and public houses, contrasts markedly with the Canada, where such tied houses are outlawed. Thus, while we see similar trends toward concentration and scale economies in Canada, the institutional setting is quite different. Differences between brewing in Canada and the U.S. are particularly important for understanding the competitive forces at work in the industry and for suggesting changes in public policy in Canada to heighten competition.

Despite growing concentration of brewing in the U.S., several studies have shown that the public is not necessarily disadvantaged. First, because of the existence of scale economies, prices can be kept low through larger scale operations. Second, competition for market share among the large breweries is intense. This is also true of Canada, where market leadership has switched among the three national breweries over the past two decades. However, for such competitive pressure to continue, entry into the market must be possible. The potential for entry will maintain the pressure for competitive behavior, even if no such entry actually occurs.

One barrier to new entrants into the field in both Canada and the U.S. is the cost of constructing a new facility. A highly efficient four million barrel per year brewing facility is estimated to cost US$200 million.[9] Even in Canada, where plant sizes would probably not exceed two million barrels, the approximate price tag of $100 million or more is steep and discourages new entrants, especially at a time when interest rates are high. Furthermore, when one adds to this the cost for a new entrant to establish a market position through advertising and promotion, the financial barrier is significant.

In the U.S. these financial restraints on entry are offest to a large degree by the ability of existing breweries to enter specific regional markets, either by shipping their product to the region, or by constructing new brewing facilities. In addition, imported beer also provides a form of potential or actual entry into the market, maintaining competitive pressure.[10] A very different situation is found in Canada. Not only are there the financial barriers to entry but institutional barriers as well. First, domestic beer must be produced in the province where it is sold. This makes competition from breweries in other parts of Canada impossible, and greatly reduces competitive pressures. Second, the extremely high provincial markup on imported beer (83% on top of federal import duties and taxes) effectively prices it out of the market, rendering it ineffective in maintaining market pressure. Third, the marketing of beer in British Columbia and other Canadian provinces is highly regulated. Absence of point-of-purchase advertising, promotional pricing in local markets, and promotional gifts and souvenirs, make entry into the market that much more difficult. Such restrictions on potential entry constitute weaknesses in the competitive system for brewing in British Columbia; entry into markets is a key element in maintaining competition in highly concentrated oligopolistic industries such as brewing.[11]

In conclusion, the structure of the brewing industry in Canada and in British Columbia is highly concentrated and growing more so over time. Not only is the industry typified by large brewing companies with national marketing power, but the production process also appears to be increasingly dominated by larger and larger plants, for the most part due to economies of scale in both production and marketing. These economies enable large brewers to produce and market their product at lower unit costs, suggesting that growing concentration need not be adverse to the public interest. Lower costs and greater competition appear be the result in the United States, where market leaders compete intensely, particularly Anheuser-Busch and Miller.

A key requirement for similar competitive pressures to be maintained in the Canadian and British Columbia brewing industries is the potential for new firms to enter the market. In addition to barriers to entry caused by scale economies, barriers are also provided by government in Canada and in British Columbia. The requirement that beer be produced in the province where it is sold, the extremely high markups on imported beer, restrictions on marketing and promotion make it exceedingly difficult for new entrants to gain a foothold in the market. Without the threat of new entrants, the oligopolistic market structure can lead to anticompetitive behaviour (higher prices, inefficient production), and failure to serve the best interests of the public through competitive prices and products. Ease of entry and access to the British Columbia beer market is essential if the industry is to maintain and improve its current competitive thrust.

Table 10-1

Canadian Brewing Industry
Market Share Trends
1960 - 1982

	Labatt	Molson	Carling O'Keefe	Others
1960	17.2%	26.0%	49.1%	7%
1961	18.1	26.4	48.0	7
1962	18.9	26.8	47.3	7
1963	20.0	27.1	45.3	7
1964	20.7	27.2	44.7	7
1965	22.5	27.5	44.0	7
1966	23.8	27.5	42.0	7
1967	25.4	28.9	38.7	7
1968	27.4	29.0	37.1	7
1969	29.4	29.2	34.7	7
1970	32.0	29.6	31.4	7
1971	32.4	29.0	31.4	7
1972	34.5	30.0	30.6	5
1973	35.6	30.6	27.5	6
1974	36.1	31.8	25.9	6
1975	36.8	32.9	25.4	5
1976	37.9	33.2	25.0	3
1977	38.6	33.8	24.7	3
1978	38.9	34.2	24.1	3
1979	36.7	36.3	23.6	3
1980	36.1	36.6	23.7	3
1981	36.4	37.0	23.5	3
1982 (est)	37.6	36.7	22.8	3

Note: Labatt fiscal year ends April 30. Molson fiscal year ends September 30 to 1962, and March 31 thereafter. Carling O'Keefe fiscal year ends October 31 to 1965; April 30, 1966 to 1970; June 30, 1971 to 1976; and March 31 thereafter.

Sources: "Monitor Report: The Canadian Brewing Industry," (Toronto: Loewen, Ondaatje, McCutcheon and Company Limited), December, 1980, for years 1960 to 1979. "Canadian Brewing Industry," (Toronto: Dominion Securities Ames Limited), March 16, 1982 for 1980-1982.

Table 10-2

Market Share of the Largest Brewers in the U.S. and Canada

U.S. Brewing Industry

		Market Share - Top 5			
1981 Rank	Company	1981	1979	1977	1970
1	Anheuser-Busch	30.3%	26.7%	23.0%	17.9%
2	Miller	22.4	20.8	15.2	4.2
3	Schlitz	7.9	9.9	13.9	12.2
5	Pabst	7.5	8.8	10.1	8.5
6	Coors	7.4	7.4	8.0	5.9
4	G. Heileman	7.8	-	3.9	-
		75.9%	73.6%	70.1%	48.7%

Canadian Brewing Industry

		Market Share - Top 3			
1981 Rank	Company	1981	1979	1977	1970
1	Molson	37.0%	36.3%	33.8%	29.6%
2	Labatt	36.4	36.7	38.6	32.0
3	Carling O'Keefe	23.5	23.6	24.7	31.4
		96.9%	96.6%	97.1%	93.0%

Sources: U.S. Data, 1970 and 1979 from R.G. Shoniker and Associates International, 1980
1977 and 1981 from *Business Week*, July 12, 1982.

Canadian Data, 1970,1977 and 1979 from "Monitor Report: Canadian Brewing Industry," December 1980, *op.cit.* 1981 data from "Canadian Brewing Industry," March 16, 1982, *op.cit.*

Table 10-3

Canadian Brewing Industry

Estimated Market Shares

by Provinces

(1980-1981 fiscal year)

	Molson	Labatt	Carling O'Keefe
Maritimes & Newfoundland	8%	50%	6%
Quebec	40	27	33
Ontario	37	39	22
Manitoba	28	45	27
Saskatchewan	45	25	10
Alberta	60	25	15
British Columbia	39	40	19
Total Canada (full year)	37	37	23

Source: "Monitor Report: Canadian Brewing Industry," December, 1980, *op. cit.*

Table 10-4

Market Shares in the Brewing Industry in British Columbia, 1970 - 1981

	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970
Molson	30.9	28.4	23.3	19.6	21.3	16.4	24.6	24.2	24.8	23.8	27.4	29.3
Labatt	39.3	45.8	50.8	54.1	53.6	51.4	37.9	38.8	35.9	31.0	32.8	33.9
Carling O'Keefe	29.1	25.7	24.4	26.2	25.1	30.2	27.2	27.6	28.8	33.4	27.8	27.8
Other	0.7	0.1	1.5	0.1	-	2.0	10.3	9.1	10.5	11.8	12.0	9.0

Source: 1976-1981, Brewers Association of Canada; 1970-1975, Pacific Brewers Distributors Ltd.

Table 10-5

Approximate Market Share of Major Canadian Brands as a % of Total National Market

Molson		Labatt		Carling	
Export	13.5	Blue	16.0	O'Keefe Ale	7.0
Canadian	12.0	50	11.0	Old Vienna	5.5
Laurentide	5.0	Budweiser	5.2	Carlsberg	4.5
Golden	2.5	Lite	1.3	Trilight	0.9
Light	3.0	Legere	0.4	Colt 45	0.8
Other	1.0	Other	3.6	Other	4.3

Source: Dominion Securities Ames Research

Table 10-6

Distribution of Plants in the Brewing Industry By Plant Capacity

A. Canada

Listed Capacity ('000 barrels)	1957	1961	1966	1971	1976	1981
0 - 25	6	1	0	0	0	0
26 - 50	11	10	5	1	2	1
51 - 100	10	12	12	9	5	4
101 - 150	8	6	10	8	5	4
151 - 250	8	11	7	11	12	7
251 - 500	7	6	7	4	7	11
501 - 1000	3	5	6	2	7	6
1001 - 1500	1	0	1	2	1	3
1501 - 2000	1	3	2	3	2	3
2001 - 2500	0	0	0	0	3	1
2501 - 3000	0	0	0	0	0	1
TOTAL	55	54	50	40	44	41

Source: Modern Brewery Age, Blue Book (various years).

B. United States

Listed Capacity ('000 barrels)	1959	1963	1967	1971	1975	1979
0 - 25	11	8	3	2	2	2
26 - 100	57	46	33	19	9	8
101 - 250	51	39	26	19	9	6
251 - 500	40	33	18	14	10	7
501 - 750	14	13	13	12	4	3
751 - 1000	16	20	22	20	9	5
1001 - 1500	14	12	15	13	7	8
1501 - 2000	4	5	3	8	6	3
2001 - 3000	5	6	5	9	9	6
3001 - 4000	3	4	5	3	3	7
4001 -	2	3	4	7	15	20
TOTAL	203	189	147	126	83	75

Source: K.G. Elzinga, "The Beer Industry," p. 230. In W. Adams, ed., The Structure of American Industry, 1982.

Table 10-7

Distribution of Plants in the Brewing Industry
By Value of Production

YEAR Dollars[a]	1926	1931	1936	1941	1946	1951	1956	1961	1966[b]
under $500,000	48	54	46	28	16	17	10	5	4
$500,000-999,999	11	15	14	16	14	10	8	7	4
$1,000,000-4,999,999	14	11	10	17	31	36	42	27	27
$5,000,000 and above	-	-	-	-	-	-	-	15	17
TOTAL	73	80	70	61	61	63	59	54	52

(a) 1926 - 1956 data are based on "Production Value"
1961 - 1966 data are based on "Shipments of Goods of Own Manufacture"

(b) Data not available after 1967

Source: Statistics Canada, Brewing Industry 1926 - 1967

Table 10-8

Distribution of Plants in the Brewing Industry
Number of Employees

YEAR No. of Employees	1926	1931	1936	*	1958	1961	1966	1972	1976	1980
Less than 50	43	51	39		11	13	13	6	10	9
50 - 99	8	18	21		21	19	19	15	6	5
100 - 199	8	6	6		12	8	10	9	12	13
200 - 499	** 4	5	4		8	11	6	6	8	7
500 - 999					2	3	4	4	3	4
1000 - 1499	-	-	-		1			2	3	3
TOTAL	63	80	70		55	54	52	42	42	41

* 1941, 1946, 1951, and 1956 data not available.
** Numbers listed between categories indicate the sum of plants for both categories taken together.

Source: Statistics Canada, Brewing Industry: 1926 - 1980

Chapter 10 Footnotes

1. Price and market share stability are, of course, not necessarily a sign of market power, just as uniform pricing is not necessarily a sign of monopoly pricing. Competitive markets also can exhibit price uniformity. Conversely, price and market share volatility can be a sign of inherent instability in the market, or of unhealthy or destructive competition. We do not believe this to be the case, however; although market shares and prices have shifted, they have not done so rapidly, nor have they vassilated between different levels. For these reasons, price and market share movements appear to be the result of healthy competitive activity in the market for beer.

2. The most comprehensive study of the structure of the U.S. brewing industry can be found in Kenneth G. Elzinga, "The Beer Industry," in Walter Adams, editor, *The Structure of American Industry*, Sixth Edition, (New York: Macmillan Publishing Company), 1982, pp. 218-248. Also see Charles F. Keithahn's report for the U.S. Federal Trade Commission, *The Brewing Industry*, (Washington, D.C.: U.S. Federal Trade Commission), 1978; Douglas F. Greer, "The Causes of Concentration in the Brewing Industry," *Quarterly Review of Economics and Business*, forthcoming; K. J. Hatten and D. E. Schendel, "Heterogeneity Within an Industry: Firm Conduct in the U.S. Brewing Industry," *Journal of Industrial Economics* 26(2):97-113, 1977; A. Horowitz and I. Horowitz, "Concentration, Competition and Mergers in Brewing," in J. F. Weston and S. Peltzman, editors, *Public Policy Toward Mergers*, (Pacific Palisades, Calif.: Goodyear Publishing Company, Inc.), 1969; and F. M. Scherer, "The Determinants of Industrial Plant Sizes in Six Nations," *Review of Economics and Statistics* 55(2):135-145, 1973.

3. There have been a number of studies of the British brewing industry by U.K. Parliamentary committees and independent researchers. See for example, Anthony Cockerill, "Mergers and Rationalization in the British Brewing Industry," *The Brewer* 60(717):105-114, 1974; Anthony Cockerill, "Economies of Scale, Industrial Structure and Efficiency: The Brewing Industry in Nine Nations," in A. T. Jacquemin and H. W. DeJong, editors, *Welfare Aspects of Industrial Markets*, (Leiden: Martinus Nijhoff), 1977; Great Britain, Parliament, House of Commons, The Monopolies Commission, *Beer: A Report on the Supply of Beer*, (London: Her Majesty's Stationery Office), 1969; G. C. Hall, "The Effects of Mergers on the Product Mix by the Brewing Industry," *Applied Economics* 11(1):21-34, 1979; and K. Hawkins, "The Price Commission and the Brewing Industry: A Critical Note," *Journal of Industrial Economics* 27(3):287-294, 1979.

4. For Germany, see F. M. Scherer, *op.cit*., A. Cockerill, 1977, op.cit., and J. Muller and J. Schwalback, "Structural Change in West Germany's Brewing Industry: Some Efficiency Considerations," *Journal of Industrial Economics* 28(4):353-368, 1980.

5. See Elzinga, *op.cit*., pp. 229-231, and Keithahn, op.cit., pp. 32-62.

6. Elzinga, *op.cit*., p. 230.

7. Elzinga, *op.cit*., p. 231 and Keithahn, *op.cit*., p. 48.

8. Existence of economies of scale in advertising beer have been demonstrated by Yoram Peles, "Economies of Scale in Advertising Beer and Cigarettes," *Journal of Business* 44(1):32-37, 1971. The importance of this finding is further supported by the magnitude of brewing industry advertising expenditures. For the U.S., see "Anheuser-Busch: The King of Beers Still Rules," *Business Week*, July 12, 1982, pp. 50-54. For Canada, see R. J. McCafferty and F. T. McCullough, *Canadian Brewing Industry*, (Toronto: Dominion Securities Ames Limited, Research Department), 1982, p. 25.

9. Elzinga, *op.cit.*, p. 232.

10. Elzinga, *op.cit.*, p. 232 and p. 246.

11. The importance of easy entry and access in maintaining the competitiveness of oligopolistic industries has been stressed by Elizabeth Bailey, "Contestability and the Design of Regulatory and Antitrust Policy," *American Economic Review* 71(2):178-183, 1981, and Elizabeth and Bailey and Anne F. Friedlaender, "Market Structure and Multiproduct Industries," *Journal of Economic Literature* 20(3):1024-1048, 1982.

Chapter 11

Constraints Affecting the Brewing Industry in British Columbia

Introduction

There are two broad classes of constraints that affect the British Columbia brewing industry. The first is the demand for beer and the trends in beer consumption. Consumer demand poses the ultimate constraint; consumption growth limits industry growth, even in the most favourable of regulatory environments. The second constraint is the regulatory framework within which the brewing industry must operate. We have touched on this subject elsewhere, but will again address the issue in the present context.

Consumption Trends[1]

Beer consumption has grown at a stable rate over the past two decades. Table 11-1 sets out annual per capita consumption of beer in litres from 1955-1981. This general trend has been interrupted as a result of strikes, either in the brewing industry or in the provincial liquor distribution systems. Over the period 1955-1981, per capita consumption in Canada has grown from 60.68 litres per year to 82.93 litres per year, a compound annual growth rate of 1.26 percent. In British Columbia over the same period per capita beer consumption grew from 51.79 litres per year to 77.07 litres per year, or 1.60 percent annually, despite the fact that 1980 was marred by strikes, and 1981 had a very cold summer and spring.

Total consumption (consumption per capita times population of the province) provides a less-clear picture. Table 11-2 presents total beer consumption compound annual growth rates from 1974-1981. From 1974 to 1979 there were relatively high growth rates in Atlantic Canada, Alberta and Saskatchewan, while the rest of the country grew at less than the Canadian average. In 1980 and 1981 a series of strikes in British Columbia and Alberta disrupted this pattern, leading to precipitous declines in 1980 and steep increases in 1981. Overall, however, total consumption has grown slowly, but steadily.

To put these growth rates in perspective, it is interesting to compare U.S. and Canadian figures for 1974 and 1979. As shown in Table 11-3, Canada experienced a growth rate of only 1.5 percent per year in total beer consumption from 1974-1979, while the U.S. saw a 3.7 percent annual growth rate. However, U.S. growth rates for wine (5.2 percent) and spirits (1.4 percent) were considerably lower than corresponding figures for Canada (8.7 percent for wine and 2.1 percent for spirits).

Per capita beer consumption for countries around the world is shown in Figure 11-1. When viewed in a global context, Canadian annual per capita beer consumption in 1980 of 87.09 litres seems modest compared with countries like West Germany, Czechoslovakia, East Germany and Australia, each of which consumed more than 130 litres per capita annually. Viewed in this way it appears that there may be room for increased beer consumption in Canada.

Beer sales have been limited by two factors. First, beer drinkers tend primarily to be young adults; this age group is no longer growing. Two factors have contributed to the declining young adult age group: 1) the aging of post-war baby boom generation; 2) low birth rates due to recent trends toward having fewer children, in later years of marriage. The second factor limiting beer consumption is the apparent shift from beer into wine and spirits in Canada, a somewhat larger shift than in the United States. Table 11-4 shows the respective volumes of beer, wine and spirits consumption in Canada since 1960. From these figures we can see that beer consumption per capita increased by roughly 39.5 percent over this 21 year period. In contrast, spirits consumption grew by 123 percent, and wine consumption increased by 322 percent. Thus, beer has met with increasingly stiff competition from competing alcoholic beverages, particularly wine. Overall, beer consumption per capita should not be expected to grow over the coming decade.

In addition to a changing consumer demand for alcoholic beverages, two significant trends within the broad category of beer consumption are evident. First, consumers seem to have moved to lighter beers, therefore from ales to lagers, and from regular to light beers, which have fewer calories and lower alcohol content. (Similar trends have been noted in wines, with a shift toward white wines and in spirits with tastes moving toward "white" spirits such as vodka, gin and light rum). In Table 11-5 we see that by 1980 the only two provinces continuing to express preferences for ales over lager were Quebec (95 percent ale consumption) and Nova Scotia (75 percent ale consumption). In most provinces there has been a marked deterioration of the market share of ales; Newfoundland is an exception with ale consumption remaining constant at roughly 33 percent. As a general rule, for the past two decades the four western provinces have consumed lager almost exclusively.

Second, there has been a marked movement of consumer preferences away from draft to packaged beer. Table 11-6 shows the decline in draft as a proportion of total beer consumption in Canada from 1955-1981. Draft declined from a 23.4 percent market share in 1955 to 7.4 percent in 1981. During the 1920's and 1930's, beer in draft form came close to 50 percent of all beer consumption, reaching 47.1 percent of the market in 1921, and gradually sliding after 1940 to its present low levels.

The importance of draft beer sales is highly variable across provinces; this is evident from Table 11-7, which presents the breakdown between draft and packaged beer by province for 1981. Draft beer varies from a low of zero in Newfoundland and Prince Edward Island to a high of 20.9 percent of beer sales in

British Columbia. Preliminary 1982 data (from January 1 to October 27, 1982) show that draft constitutes a slightly higher 21.4 percent of domestic beer sales in British Columbia. British Columbia is clearly the exception to the rule in Canada, and there is evidence that draft beer sales in the province continue to remain strong, contradicting both historical trends and sales patterns in other provinces.

The seasonality of beer consumption is also an important constraint on the industry. Table 11-8 sets out the sales of domestic beer for the three most recent years for which complete data are available, 1979-1981. We can see that the three summer months contain a large portion of total consumption. For example in 1981, summer sales were 6.6 million hectolitres or 32 percent of the annual total. If we extended the period to include both May and September, the percentage of annual sales rises to fifty percent. The only exception to slow beer sales for the rest of the year is the Christmas holiday season, when sales rise to their May or September level. Because of the perishable nature of the final product, this demand pattern means that excess capacity to produce beer must be carried for much of the year. (Beer has a 90-day shelf-life in bottles and cans, and lasts only several weeks in kegs.) Thus, competitors in the industry must finance excess capacity for half the year, when it is largely unused, to meet peak demands in the summer and spring.

Two further consumption trends will be discussed: the consumption by Canadians of foreign produced beer, and the consumption by foreigners of Canadian beer. The former constrains the domestic beer industry, since domestic brewers must also compete against foreign beer producers. The latter, in contrast, opens up new possibilities for the Canadian brewing industry by removing dependence on Canadian consumption.

Table 11-9 shows beer imports into Canada from 1974 through 1980. These figures incorporate the effects of widespread beer strikes in western Canada during 1978 and 1980, which caused imports of beer (principally from the United States) to rise dramatically. The total figure has settled once more around the one percent level, as can be seen in Table 11-10 showing imports from 1977-1981 for the four most populous provinces. While there was some increase in imported beer as a percentage of total provincial beer sales in these provinces in 1978 and 1979, imports had fallen very close to 1977 levels by 1981. Imports do not appear to be a major factor constraining the growth of the Canadian beer industry.

Exports are a significant factor in the brewing industry, with extensive opportunities for exporting Canadian beer, especially to the United States. Table 11-11 sets out the growth of Canadian beer exports from 1975-1980. Over this period there has been a nearly fourfold increase in exports, to 41.1 million imperial gallons. Exports represented a total of 8.71 percent of total sales of Canadian produced beer in 1980; the United States alone accounted for 8.67 percent of total Canadian beer sales in that year. These figures were up sharply from their 1979 levels of 7.32 percent for total exports as a percentage of Canadian-produced beer, and 7.28 percent for sales to the United States. Domestic sales face both considerable competition from other beverages and a slowdown in the growth of the beer drinking age group; exports, in contrast, represent an area of considerable growth potential for the Canadian brewing industry.

Income, Price and the Demand for Beer: A Review of the Evidence

Two important aspects of consumption have not yet been explored: the relationship between income and beer consumption, and the relationship between the price of beer and beer consumption. These issues typically occupy much of the economic literature on consumer behaviour, and economists refer to these relationships as "elasticities". Intuitively, the income elasticity for a good or service shows the response of the level of consumption to changes in income levels. For example, if incomes rise by ten percent and consumption of a good or service also rises by ten percent the income elasticity for that good or service would be equal to:

$$\frac{\text{\% Change in Quantity Consumed}}{\text{\% Change in Income Level}} = \frac{+10\%}{+10\%} = 1.0$$

In other words, changes in income for this good are proportionally matched by changes in consumption. Some goods, typically luxury goods such as art, antiques and jewelry, have income elasticities greater than one. This indicates that, as incomes rise, the proportion of household income spent on such items rises.

In the case of price elasticity we have the same intuitive idea at work, though in reverse. Increases in price should lead to decreases in consumption and decreases in price should lead to increases in consumption. Let us assume, for example, that the price of certain good decreases by five percent. This decrease elicits a five percent increase in consumer demand for the good. As before we can relate these two changes to calculate the elasticity in this instance:

$$\frac{\text{\% Change in Quantity Consumed}}{\text{\% Change in Price of Good}} = \frac{+5\%}{-5\%} = -1.0$$

In the present example the elasticity is -1.0 showing that a decrease in price is exactly offset by a corresponding increase in quantity consumed. The reverse would also be true, so that a five percent increase in the price for this good could be expected to lead to a five percent decrease in the quantity consumed.

Goods and services that have elasticities with respect to price that are larger in magnitude than -1.0 (i.e. -2.0, -3.0, etc.) are said to be highly price elastic, since changes in price will lead to proportionally changes in demand. Say a certain good has a price of elasticity of -2.5. In such a case a ten percent decrease in price would lead to a 25 percent increase in demand (e.g., -10%, the price decrease multiplied by -2.5, the price elasticity, = +25%, the increase in demand). Conversely for such price elastic goods or services, a price increase leads to proportionally larger decreases in demand for the goods or services.

Both the income and price elasticities of demand for beer are important in our analysis; changes in both income and prices have affected beer consumption over time. The price elasticity of beer is particularly important, since beer prices have risen dramatically over the past decade. Should the demand for beer be price elastic, such price increases can be expected to provide further constraints on the consumption of beer.

There are several sources of price elasticity measurements, most of them for the United States. The studies generally show that the price elasticity for beer lies between -0.3 and -0.4 implying that the demand for beer as a whole is relatively unresponsive to price change. For instance at an elasticity of -0.4, a ten percent price increase would only lead to a four percent decline in sales. The most definitive study on the subject demonstrates that price elasticities are much closer to -0.1 than to -0.4 implying even lower reponsiveness to price changes.[2] A recent Canadian study supports these estimates, with its finding of a price elasticity over the 1970's of -0.22.[3] These price elasticity studies taken together lead us to conclude that price does not represent a serious constraint on beer consumption and, as a result, additional price increases should not lead to significant decreases in consumption.

The demand for a particular brand of beer is, of couse, likely to be much more elastic. If the price of one brand of beer increases, consumers are likely to switch to other brands, and a large decrease in the demand for the brand will occur. The converse is also true; a price decrease for one brand is likely to elicit a large proportional increase in demand, as consumers switch from other brands. While the demand for beer as a whole is inelastic, the demand for a particular brand may be highly elastic. Thus, while there is no incentive for breweries to lower prices collectively, there are incentives for them to do so individually, particularly on selected brands.

Results from the previously-cited U.S. work indicate that there is no relationship between income and beer consumption; the income elasticity of demand for beer was found to be effectively zero.[4] Indeed, as shown in Table 11-12, between 1970 and 1980 the proportion of consumption expenditure going towards alcoholic beverage purchases decreased from 3.77 percent to 3.28 percent. Total personal expenditure during the period rose from $50.3 billion to $168.1 billion, and total personal income rose from a 1970 level of $66.6 billion to a 1980 level of $237.3 billion. Thus a nearly fourfold increase in total personal income led to a slight decline in the proportion of expenditures by households allocated to alcoholic beverages.[5] Thus, whereas general beer price increases appear unlikely to cut beer consumption, it is also unlikely that income increases will stimulate consumption. Given such inelastic demand with respect to both price and income, the only sources of increased demand in Canada rest with increases in the beer drinking population, also likely to be small in future. In summary, the brewing industry in Canada faces stable domestic demand; however, the export of Canadian beer into the United States may be a significant source of increased demand for Canadian beer.

Regulatory Constraints

Canada's brewing industry is regulated by virtually all levels of government. The federal government regulates alcoholic beverages through the imposition of an excise tax (on volume), a sales tax (on value), through the

Broadcast Act (banning airwave advertising of spirits and leaving to the provinces rules for wine and beer advertising), through the Intoxicating Liquors Act, and finally through the Canadian Wheat Board's ability to set prices for key grains used in the brewing and distilling process. The provinces control the production, distribution, marketing and consumption of beer, and the regulation differs considerably across Canada. (See appendix Table 4A-1 for detail).

Although regulatory constraints remain significant, the brewing industry has benefited from a general relaxation of regulations concerning the distribution and consumption of beer. As social values have changed over the past several decades, provincial regulations have also changed. In British Columbia the past decade has seen numerous changes: the development of neighbourhood pubs, Sunday drinking, the expansion of the Liquor Distribution Branch store network and its expansion of consumer choice, the move toward self-serve liquor stores, beer in sports stadiums, the freeing of prices, and the removal of prohibition of airwave advertising for wine and beer. Regulations have been eased to allow promotions by brand and not just by brewery, and with greater flexibility in setting prices, price advertising in print media has become popular. Thus, the brewing industry in British Columbia is facing far fewer constraints than even in the very recent past. Such increased regulatory flexibility offsets some of the constraints presented by consumption patterns. Additional governmental constraints are presented by federal and provincial taxation; in chapter 8, increases in provincial taxes were shown to be offset, for the most part, by relative decreases in federal taxes. Thus the increase in government share of beer of beer revenue has increased only slightly in British Columbia.

Conclusions

The brewing industry in Canada, and in British Columbia, faces constraints likely to influence competition in the industry in the future. First are constraints related to the demand for beer, including consumption trends, competition from the other beverages, changing preferences for types of beer, import and export opportunites, and demand and income elasticities. Consumption of beer has been virtually stable over the past seven years, marred by periodic strikes either in the brewing industry or in the beer distribution system. Given the aging of the Canadian population and the lack of future growth of the 25-35 age group, it is unlikely that beer consumption will change over the next decade. Beer faces stiff competition from other alcoholic beverages, particularly wine. Per capita consumption of beer increased by only 39.5 percent between 1960 and 1981, while wine consumption per capita increased by 322 percent, and spirit consumption grew by 123 percent.

Competition with other alcoholic beverages and changing demographic patterns are not alone in constraining the industry; there have also been marked changes in consumption patterns among beer drinkers. Two trends are particularly noteworthy: the trend toward packaged beer and away from draft beer in all provinces save British Columbia; and the trend toward lagers and away from heavier ales, except in Quebec, Newfoundland and Nova Scotia. Seasonality of consumption is also of major significance. One potential constraint that does not affect the Canadian brewing industry is competition from imports. Foreign beer has not made significant inroads into the Canadian market with the exception of years when strikes in Western Canada cut off the supply of domestic beer. On the other hand, the export market presents a major avenue for future sales expansion as exports, primarily to the United States, have risen to nearly nine percent of the total sales of the Canadian brewing industry.

Two further factors that often constrain markets for goods and services are also important for beer. First, the demand for beer appears unrelated to the level of income; future increases in income, or the lack thereof, are not likely to affect demand significantly. Similarly, several studies have shown that the demand for beer is also relatively independent of the price, and that, at present levels, price increases will not have a major adverse effect on demand. This is a finding of particular importance for an industry which has seen prices move ahead rapidly over the past decade.

A final set of constraints facing the brewing industry are those imposed by the various levels of government. Public attitudes toward the consumption of alcoholic beverages have been changing steadily over the past decade or two with increasing acceptance apparent. British Columbia has been the most dynamic province in this respect, and has made a number of fundamental changes in the rules relating to retail distribution, licensing and to pricing. There is every expectation, particularly here in British Columbia, that continued liberalization of attitudes and regulations is in the offing. This should remove some of the constraints which have prevented the industry from exploring the full range of competitive tools typical of most consumer products industries.

Table 11-1

Per Capita Consumption of Beer By Province

(in litres)

Province	1955	1960	1965	1970	1975	1976	1977	1978	1979	1980	1975-80 Average	1981
Quebec	62.70	62.62	68.94[a]	76.80	95.36	95.43	94.42	94.63	96.74	96.50	95.51	92.71
Ontario	74.09	69.02	71.65	77.78	88.29	84.89	84.88	86.86	87.65	87.57	86.69	88.43
CANADA	60.68	60.95	64.62[a]	70.83	86.45	85.30	85.02	84.09	87.53	87.09	85.91	82.93
Newfoundland	27.19	31.02	35.19	45.32	89.93 [a]	81.66 [b]	83.35	84.21	86.22	84.81	85.03	87.45
British Columbia	51.79	56.85	59.63	76.07	81.70	84.42	86.14	73.06 [b]	88.34	77.87 [b]	83.59	77.07
Alberta	57.00	59.44	60.73	68.08	77.91	79.24	79.63	75.51 [c]	80.53 [d]	77.74 [b]	78.43	51.45 [b]
Manitoba	54.89	61.36	62.24	70.15	82.23	80.47	77.61	68.56 [c]	77.66	77.45	77.33	77.34
New Brunswick	25.97	29.50	39.77	46.48	71.19	70.70	64.75 [a]	74.97	76.79	77.08	72.58	77.09
Nova Scotia	28.58	34.69	44.17	54.65	68.87 [a]	73.92	73.36	72.80	75.28	74.68	73.15	74.12
Prince Edward Island	16.11	22.04	32.60	45.18	65.11	65.24	68.81	70.05	74.41	74.12	69.62	71.64
Saskatchewan	45.13	49.24	56.56	58.41	70.53 [a]	68.45	67.27	71.36	69.93	69.98	69.59	71.96

a) Strike in liquor distribution system.
b) Strike in brewing industry
c) Labatt, Carling strike
d) Molson strike

Note: Provinces are ordered by 1975-80 average consumption.
Source: Brewers Association of Canada

Table 11-2
Provincial Growth Rates in Total Beer Consumption

Province	Compound Annual Growth 1974 - 1979	% Growth	
		1980	1981
Prince Edward Island	4.8	0.5	(7.9)
New Brunswick	3.7	1.5	(4.0)
Alberta	3.4	(32.5)[c]	59.7[a]
Nova Scotia	2.6	(0.4)	(1.3)
Saskatchewan	2.5	6.9	(7.3)
Newfoundland	2.3	1.8	(1.4)
CANADA	1.5	(4.2)	4.9
Quebec	1.5	(3.2)	(0.1)
British Columbia	1.4	(14.1)[c]	17.8
Ontario	1.0	1.3	1.5
Manitoba	b	1.4	(2.6)

a) Interim figure
b) Less than 0.1%
c) Strike year

Source: Brewers' Association of Canada

Table 11-3

Total Consumption of Alcoholic Beverages: U.S. and Canada

1974 and 1979

(000,000 U.S. Gallons)

Country	1974	1979	Five Year Annual Compound Growth Rate
U.S.A.			
Beer	4,470.2	5,345.2	3.7%
Wine	341.8	447.2	5.2%
Spirits	417.2	447.3	1.4%
CANADA			
Beer	502.5	541.7	1.5%
Wine*	34.8	52.8	8.7%
Spirits	46.3	51.4	2.1%

* Fiscal year ending March 31, 1980

Source: Quarterly Beverage and Alcohol Report 1980 Edition. (Toronto, R.G. Shoniker and Associates International), p. 1.

Table 11-4
Per Capita Consumption of Beer, Spirits and Wine in Canada
1960 - 1981

Fiscal Year Ended March 31	Beer (Litres)	Spirits (Litres)	Wine (Litres)
1960	60.95	3.74	2.02
1961	60.03	3.77	2.12
1962	60.28	3.83	2.19
1963	61.64	3.95	2.26
1964	63.37	4.16	2.42
1965 [b]	64.62	4.06	2.35
1966	64.76	4.69	2.78
1967	66.90	4.83	2.88
1968	68.13	5.12	3.06
1969 [a,b]	67.88	5.03	3.18
1970	70.83	5.17	3.70
1971	74.64	5.42	4.16
1972	78.58	6.10	4.88
1973	81.75	6.53	5.29
1974	85.18	7.15	5.62
1975	85.92	7.82	5.90
1976	86.96	7.95	6.24
1977	85.38	8.13	6.57
1978	86.06	8.24	7.25
1979 [c]	84.15	8.34	8.23
1980 [c]	87.04	8.05	8.43
1981 [c]	85.00	8.34	8.52

a) Consumption figures reflect the effect of the strike in the brewing industry in Ontario.

b) Consumption figures reflect the effect of the strike in distribution system for spirits and wine in Quebec.

c) Consumption figures reflect the effect of strikes in the brewing industry in Western Canada.

Source: Statistics Canada, 'The Control and Sale of Alcoholic Beverages in Canada'.

Table 11-8
TOTAL SALES OF CANADIAN-PRODUCED BEER IN CANADA
(Hectolictres)

	1981			1980			1979		
	Draught	Packaged	Total	Draught	Packaged	Total	Draught	Packaged	Total
January	104,310^{r}	936,229^{r}	1,067,539^{r}	126,658	1,105,888	1,232,546	119,296	1,026,482	1,145,778
February	117,531	1,148,859	1,265,686	110,442	1,188,610	1,299,052	124,185	1,124,400	1,248,585
March	132,370	1,413,859	1,546,229	130,331	1,327,186	1,457,517	149,743	1,394,260	1,544,003
April	131,517	1,573,850	1,705,367	136,242	1,561,550	1,697,792	137,074	1,419,076	1,556,150
May	130,916^{r}	1,747,505^{r}	1,878,421^{r}	141,197	1,864,995	2,006,192	147,603	1,771,355	1,918,958
June	145,062	2,010,135	2,155,197	145,809	1,890,186	2,035,960	153,255	2,032,558	2,185,703
July	143,123^{r}	2,212,426^{r}	2,355,549^{r}	136,983	1,998,439	2,135,422	143,970	1,990,864	2,134,834
August	129,681	1,878,384^{r}	2,008,065^{r}	93,681	1,615,782	1,709,463	159,391	1,935,564	2,094,955
September	128,960	1,611,825	1,740,785	107,150	1,295,610	1,402,760	119,313	1,463,900	1,583,213
October	124,343	1,436,859	1,561,202	133,732	1,427,667	1,561,399	139,096	1,529,510	1,668,606
November	122,414	1,396,811	1,519,225	114,393	1,276,970	1,391,363	133,278	1,463,180	1,596,458
December	112,489	1,723,221	1,835,710	116,019	1,632,009	1,748,028	118,642	1,744,499	1,863,141
Total	1,522,716	19,116,259	20,638,975	1,492,637	18,184,857	19,677,494	1,644,846	18,895,538	20,540,384

r - Revised

NOTE: Figures are provided by the Brewers Association of Newfoundland Limited; Quebec Brewers Association; Brewers Warehousing Company; breweries which sell to the New Brunswick Liquor Corporation, the Prince Edward Island Liquor Control Commission, Nova Scotia Liquor Control Commission, Northwest Territories Liquor Control System, Saskatchewan Breweries Association, Pacific Brewers Distributors Limited and Yukon Territory Liquor Corporation. Figures for remainder of provinces are reported by provincial liquor boards or commissions.

Table 11-6

Domestic Beer Sales in Canada
1956 - 1981

Calendar Year	Draught Hectolitres	Draught %	Packaged Hectolitres	Packaged %	Total Hectolitres
1955	2,195,600	23.4	7,187,400	76.6	9,383,000
1956	2,166,142	22.2	7,593,051	77.8	9,759,193
1957	2,192,322	21.7	7,915,522	78.3	10,107,874
1958	2,152,392	21.9	7,663,898	78.1	9,816,290
1959	2,252,155	21.4	8,285,341	78.6	10,537,496
1960	2,212,959	20.6	8,508,418	79.4	10,721,377
1961	2,238,556	20.5	8,686,814	79.5	10,925,370
1962	2,342,875	20.5	9,108,325	79.5	11,451,200
1963	2,431,660	20.6	9,352,388	79.4	11,784,048
1964	2,660,802	21.5	9,722,661	78.5	12,383,469
1965	2,712,396	21.4	9,973,722	78.6	12,686,118
1966	2,879,635	21.7	10,389,081	78.3	13,268,716
1967	2,850,053	20.6	10,984,741	79.4	13,834,800
1968	2,754,586	19.8	11,161,301	80.2	13,915,881
1969	2,883,030	19.5	11,904,869	80.5	14,787,899
1970	2,833,181	18.3	12,627,285	81.7	15,460,466
1971	2,889,469	17.4	13,711,251	82.6	16,600,720
1972	2,729,251	15.6	14,727,651	84.4	17,456,908
1973	2,613,400	14.0	16,004,544	86.0	18,617,944
1974	2,415,594	12.7	16,626,302	87.3	19,041,896
1975	2,312,531	11.9	17,204,595	88.1	19,517,126
1976	2,136,443	11.0	17,344,901	89.0	19,481,344
1977	1,970,199	10.1	17,630,337	89.9	19,600,536
1978	1,649,316	8.6	17,514,200	91.4	19,163,516
1979	1,644,846	8.1	18,895,538	91.9	20,540,384
1980	1,492,637	7.6	18,184,857	92.4	19,677,494
1981	1,522,716	7.4	19,116,259	92.6	20,638,975

Source: Brewers' Association of Canada

Table 11-7

Sales of Domestic Packaged and Draught Beer by Province - 1981

	Draught Hectolitres	Draught %	Packaged Hectolitres	Packaged %	Total Hectolitres
Newfoundland	-	0.0	490,219	100.0	490,219
Prince Edward Island	-	0.0	84,384	100.0	84,384
Nova Scotia	81,125	13.0	541,673	87.0	622,798
New Brunswick	24,042	4.6	499,777	95.4	523,819
Quebec	184,505	3.1	5,687,179	96.9	5,871,684
Ontario	580,570	7.6	7,030,702	92.4	7,611,272
Manitoba	53,704	6.8	733,792	93.2	787,496
Saskatchewan	27,701	4.2	634,791	95.8	662,492
Alberta	98,767	5.9	1,579,374	94.1	1,678,141
British Columbia	470,464	20.9	1,783,197	79.1	2,253,661
Yukon	1,721	5.4	30,222	94.5	31,943
Northwest Territories	117	0.6	20,949	99.4	21,066
CANADA	1,522,716	7.4	19,116,259	92.6	20,638,975

Source: Brewers' Association of Canada

Table 11-5
Canadian Brewing Industry
Trend in Ale: Lager Consumption
1960 - 1980

	1960			1965			1970			1975			1978			1980*		
	Ale	Lager	Porter & Stout	Ale	Lager	Porter & Stout	Ale	Lager	Porter & Stout	Ale	Lager	Porter & Stout	Ale	Lager	Porter & Stout	Ale	Lager	Porter & Stout
Newfoundland	33.0%	66.9%	0.1%	38.9%	61.0%	0.1%	30.5%	69.5%	0.0%	32.6%	67.4%	0.0%	34.8%	65.2%	0.0%	32.0%	68.0%	-
Prince Edward Island	87.1	12.5	0.4	68.5	31.3	0.2	40.3	59.4	0.3	27.2	72.7	0.1	30.2	69.6	0.2	33.0	67.0	-
Nova Scotia	81.0	18.5	0.5	79.4	20.1	0.5	77.8	21.8	0.4	70.3	29.4	0.3	71.1	28.7	0.2	75.0	25.0	-
New Brunswick	88.0	11.7	0.3	74.9	24.8	0.3	50.9	48.8	0.3	30.0	69.3	0.2	24.3	75.6	0.1	21.0	79.0	-
Quebec	94.7	3.9	1.4	96.1	2.8	1.1	96.5	2.7	0.8	95.4	4.2	0.4	94.4	5.2	0.4	95.0	5.0	-
Ontario	65.3	34.1	0.6	64.8	34.7	0.5	63.2	36.3	0.5	56.5	43.2	0.3	49.1	50.6	0.3	45.0	55.0	-
Manitoba	5.6	93.8	0.6	3.1	96.4	0.5	3.2	96.4	0.4	2.5	97.4	0.3	2.9	96.9	0.2	3.0	97.0	-
Saskatchewan	1.5	97.6	0.9	1.1	98.1	0.8	3.9	95.3	0.8	2.1	97.4	0.5	1.7	98.0	0.3	2.0	98.0	-
Alberta	1.9	97.3	0.8	1.9	97.6	0.5	2.8	96.7	0.5	2.7	96.9	0.4	3.2	96.5	0.3	4.0	96.0	-
British Columbia	2.8	96.9	0.3	2.0	97.7	0.3	1.4	98.2	0.4	3.0	96.7	0.3	2.3	97.5	0.2	2.0	98.0	-
Yukon	22.0	78.0	0.0	11.5	88.5	0.0	4.6	95.2	0.2	2.0	98.0	0.0	7.8	92.0	0.2	n/a	n/a	n/a
Northwest Territories	37.0	62.9	0.1	15.9	84.1	0.0	5.0	94.9	0.1	2.7	97.1	0.2	4.6	95.3	0.3	n/a	n/a	n/a
CANADA	58.8	40.4	0.8	59.3	40.0	0.7	57.4	42.1	0.5	55.7	43.9	0.4	53.1	46.6	0.3	n/a	n/a	n/a

* Rounded to nearest 1.0%
n/a: not available

Source: Brewers' Association of Canada

Table 11-9
Canadian Beer Imports by Country
1974 - 1980
(000,000 Imp. Gal.)

	1980	1979	1978	1977	1976	1975	1974
Netherlands	1.5	1.0	1.5	1.2	1.0	0.9	--
U.S.A.	10.1	1.5	10.1	1.1	0.5	0.3	--
West Germany	0.5	0.5	0.7	0.6	0.5	0.6	--
U.K.	0.4	0.3	0.3	0.3	0.3	0.4	--
Denmark	--	0.2	0.3	0.2	0.2	0.2	--
Total of Above	12.5	3.5	12.9	3.4	2.5	2.4	--
All Countries	13.0	3.7	13.1	3.7	2.7	2.5	--
Imports as % of Total Beer Sales in Canada	2.9%	0.82%	2.94%	0.89%	0.68%	0.56%	0.41%

Source: Statistics Canada
Brewers Association of Canada
Dominion Securities Ames Research

Table 11-10

Estimate of Imports as a % of Total Provincial Beer Sales

	1981	1980	1979	1978	1977
British Columbia	1.5%	N.A.	2.18%	2.90%	1.85%
Alberta	1.1	4.3	4.15	1.47	1.01
Ontario	1.2	N.A.	.71	.82	.72
Quebec	0.3	N.A.	N.A.	N.A.	.18

N.A.: Not available

Source: Brewers Association of Canada and Dominion Securities Ames Research

Table 11-11

Canadian Beer Exports by Country
1975 - 1980
(000,000 Imp. Gal.)

	1980	1979	1978	1977	1976	1975
U.S.A.	41.1	35.5	26.7	19.6	15.2	10.7
Others	0.2	0.2	0.2	-	-	-
Total	41.3	35.7	26.9	19.6	15.2	10.7

Source: Statistics Canada

Table 11-12

Current Expenditures on Alcoholic Beverages as a % of Personal Consumption Expenditures

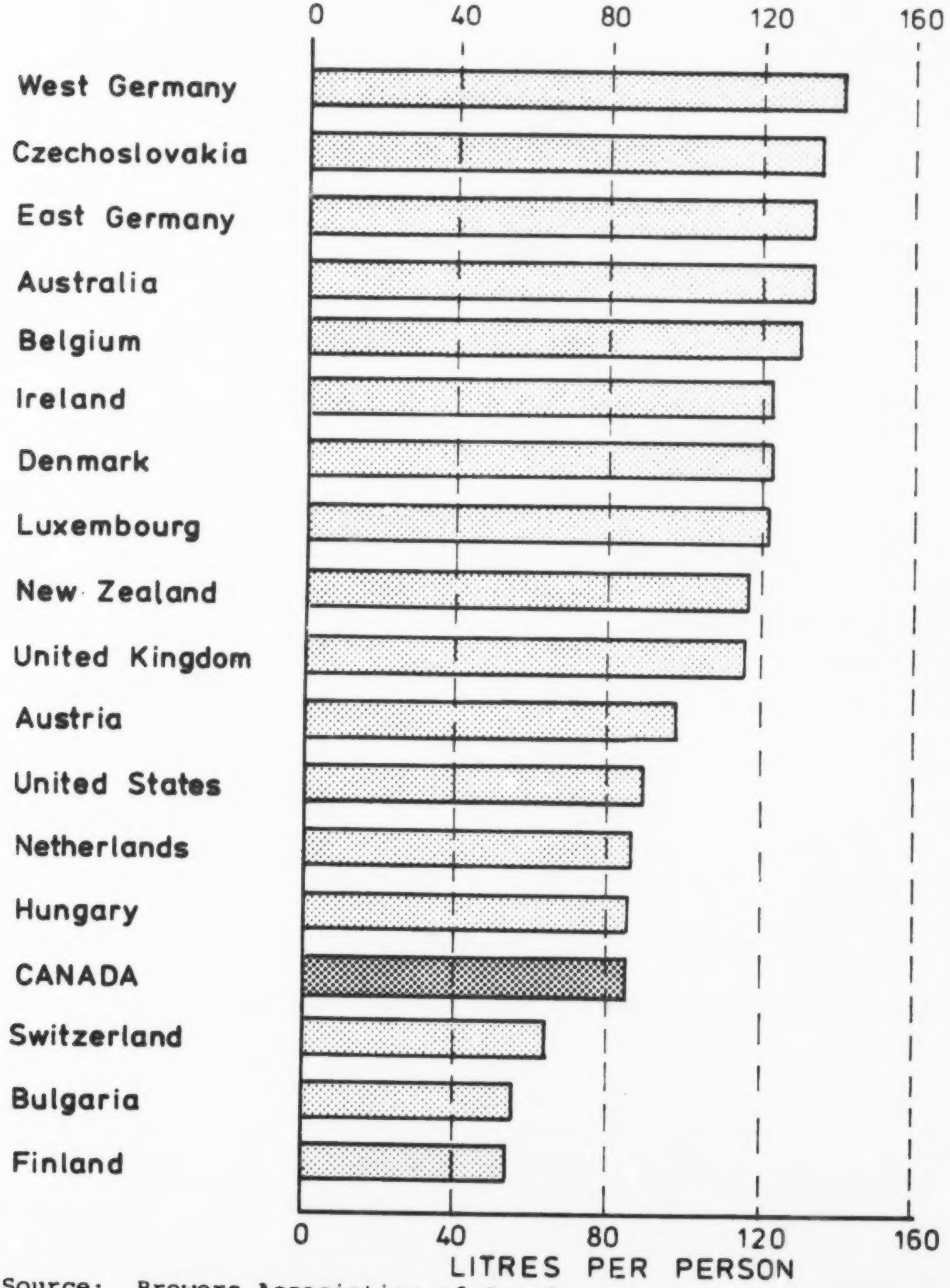
(current $ percentages)

1980	3.28%
1979	3.21
1978	3.32
1977	3.37
1976	3.41
1975	3.61
1974	3.63
1973	3.72
1972	3.84
1971	3.84
1970	3.77

Source: Statistics Canada and Dominion Securitites Ames Research

Figure 11-1

PER CAPITA CONSUMPTION OF BEER
1980



Source: Brewers Association of Canada

Chapter 11

Footnotes

1. The data for most of the tables presented in this chapter have come from the following sources: Brewers Association of Canada, About Beer and the Brewing Industry: An Information Summary, (Ottawa: Brewers Association of Canada), 1982; John Drolet, "Monitor Report: The Canadian Brewing Industry, Facts, Figures and Forecasts," (Toronto: Lowen, Ondaatje, McCutcheon and Company Limited), 1980; R. J. McCafferty and F. T. McCullough, "Canadian Brewing Industry," (Toronto: Dominion Securities Ames Limited), 1982; and R. S. Shoniker, Quarterly Beverage and Alcohol Report: The Trends and Prospects of the American and Canadian Beer, Wine and Spirits Markets (Toronto: R. S. Shoniker and Associates International), 1980.

2. For details, and a review of other studies and findings, see Stanley I. Ornstein and Dominique Hanssens, "Alcohol Control Laws, Consumer Welfare, and the Demand for Distilled Spirits and Beer," (Los Angeles: Graduate School of Management, University of California at Los Angeles, Center for Marketing Studies), Paper No. 102, March, 1981, pages 28-37. A different set of estimates for both price and income elasticities can be found in Thomas F. Hogarty and Kenneth G. Elzinga, "The Demand for Beer," Review of Economics and Statistics 54(2):195-198, 1972. Hogarty and Elzinga, however, rely on a data set which is not as good as the one used by Ornstein and Hanssens, a problem they readily concede. Thus, we rely on the Ornstein and Hanssens estimates.

3. McCafferty and McCullough, "Canadian Brewing Industry," op.cit., pp. 17-18.

4. Ornstein and Hanssens, op.cit., pp. 31-37.

5. Of course, this does not constitute a definitive test of income elasticity. Many factors besides income have changed over the decade, and the impact of income changes cannot be isolated.

PART THREE

CONCLUSIONS AND RECOMMENDATIONS

Chapter 12

Conclusions: Putting the Pieces Together

A Review of the Findings I: Industry Operations (PART ONE)

In the preceding chapters of this report we have discussed the production, distribution and marketing of beer in British Columbia. In the course of our analysis we were able to identify areas where the present system is not performing as a competitive market should perform. To provide the basis for our conclusions and recommendations, we now recapitulate these findings and their implications, from which the specific recommendations can flow.

The Production System

Beer production is a very old, but relatively simple process. This linear flow system involves little in the way of mechanical complexity; for the most part the beer is in stationary tanks for either fermenting or aging. The major exception to this lack of complexity is in bottling and canning, the final and most costly stage of the production process. Here expensive, complicated machinery operates at speeds of up to 1200 bottles or 2000 cans per minute. There is little variation in production costs, since most inputs are either standardized or come from quasi-monopolists. (Again the exception is in packaging, the costs of which can vary considerably according to the age and sophistication of the equipment.) Specific factors are: energy, purchased from B.C. Hydro at identical rates; malt, purchased from suppliers whose prices are regulated by the Canadian Wheat Board; labour, purchased by the three major breweries under identical contracts from the Brewery, Winery and Distillery Workers Union Local 300; federal and provincial taxes (and markups) which are identical for all brewers; media advertising rates, also identical for all breweries; costs of capital, similar for the three national breweries; and, for the lower mainland breweries in Vancouver and New Westminster, water, purchased at fixed prices from the Greater Vancouver Regional District, and property taxes, similar for all municipalities. In short, on the input side, there can be little variation in costs. Similar production technology also implies little variation in input choices. Only the speed and the modernity of the packaging lines leads to significant differences in the entire brewing and packaging process.

The Distribution System

In contrast to the simplicity of the production system, beer distribution in British Columbia is complex. Most retail products are distributed in a traditional "three-tier" system moving from the producer, through a distributor, and then to the retailer where the public can purchase the product. The distribution system for beer in British Columbia is much more complex; while the producers (breweries) distribute some product themselves, they also rely on a distributor, and the distributor as well relies on other agents for the distribution of still other product. To complicate matters further, there is the problem of returning used bottles and cans; the traditional three-tier system involves only one-way distribution from the producer to the consumer. Finally, one of the breweries must use its own separate distribution system which adds yet again to the intricacy of the system.

Alternative methods of distribution operating elsewhere could overcome some of the problems in the B.C. system (notably the return of empties), but they would impose other direct and indirect costs on consumers. The Manitoba system, under which hotels distribute bottled beer and collect empties, has a correspondingly reduced Provincial markup. In Ontario, Brewers Warehouse (wholesale) and Brewers Retail, industry cooperatives which operate over 500 stores, distribute beer to the public. This system minimizes distribution costs but lacks variety. Finally, the Quebec distribution system, which relies on small grocery stores, is the most convenient for the consumer, but entails high distribution costs and causes problems both in the enforcement of drinking laws and in maintaining product freshness. Largely as a result of these higher costs, it also leads to the lowest provincial revenue share of any Canadian system.

In contrast to these systems, beer distribution in most parts of the United States is accomplished using the classic three-tier system. Beer is readily available to consumers in supermarkets, groceries and liquor stores. The system is the most convenient for the consumer, though again poses some problems in enforcement and leads to a lower tax take or markup by state governments. Finally, since few states have litter laws analogous to those in Canada, the vast majority of systems do not have to deal with bottle and can returns, making the systems simpler and cheaper to operate than those in Canada.

The Marketing System

In a normally functioning competitive market, a model which applies to the vast majority of consumer goods, marketing strategy is comprised of four key elements known in marketing theory as the "4 P's": Product, Place (Distribution), Promotion, and Pricing. A firm operating in an unfettered competitive market employs each of the four P's in combination to construct an effective marketing strategy. The four elements do not operate in isolation; markets where one or more of these decision elements are constrained can be expected to lack the competitive vigour of markets where all four are at work.

The following sections contain a review of the elements of marketing strategy and how they function with respect to the marketing of beer in British Columbia. Pricing, a central focus of this report, is discussed in more detail last.

Product is relatively unconstrained and innovation occurs here regularly; light beer is the outstanding recent example. Product innovation is limited by restrictions on the other "P's", and innovation in packaging is constrained by the enforced reliance on the "stubby brown bottle".

Place (Distribution) is highly constrained compared with competitive markets in other food products such as cereals, soft drinks, etc., distributed through grocery stores and supermarkets. Beer distribution for bottles and cans is restricted to some 216 LDB stores, 80 LDB agency stores plus licensees who sell for off-premise consumption. Draft beer can only be sold through licensees. Moreover, only one brand of regular draft can be sold by a given licensee, as well as one "premium" draft (to date only one regular beer has been certified as a premium). Licensees are only allowed to switch their brand of draft once every six months, clearly restricting the flexibility of marketers to attract new accounts. Compounding the difficulty, draft beer prices can only be changed once per month. A final constraint in the distribution of beer is a result of the policy of mandatory recycling of bottles and cans, as mentioned previously. The policy to recirculate bottles, which addresses an environmental objective, places economic demands on the beer distribution system for storage and retrieval of empties.

Promotion, another key element in the marketing of a consumer good like beer, is greatly restricted in British Columbia. Advertising must be approved by the LCLB for all mass media. Strict rules surround promotional activity, and promotional gifts such as t-shirts, coasters, ashtrays, pens/pencils, are not permitted. Point-of-purchase advertising or promotion of any kind is not allowed. Finally, as discussed below under pricing, the requirements that prices must be uniform across the province and that they change at most once per month, further restrict the possibility of localized promotional campaigns. Such restrictions combine to make it difficult to promote new brands, and indeed to be at all aggressive in marketing beer in British Columbia. The net result is a substantial reduction in competitive pressure.

In summary, the marketing of beer, using production, distribution or promotion related strategies is greatly constrained in British Columbia. In the face of the barriers that exist, it is very difficult to have healthy, effective competition. Moreover, there is some evidence that small breweries are particularly disadvantaged in this respect; they are effectively prevented from using tightly targeted local marketing and pricing campaigns to establish well-defined submarkets. Instead they must resort to more expensive province-wide activities, severely hindering their ability to establish a strong entry position in the market.

The Pricing System

Pricing is an enormously complex issue, both from a corporate strategic point of view and with respect to the specific price-changing rule used by the LDB in British Columbia. At the strategic level, pricing presents the marketing decision-maker with difficult choices, usually in the absence of complete information. For example, corporate pricing decisions have a direct impact on the level of demand, on the need for complementary marketing strategies, on production, and most importantly on revenues and profits. Deep price cuts may stimulate demand, but may also lead to potential declines in revenue. Price competition is a crucial issue facing the firm, and can only occur within the

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The pricing mechanism utilized in British Columbia is a particularly complex process. Although the process for pricing imported beers is relatively straightforward, local brewers are very tightly constrained in their pricing decisions. While they are free to set the final retail price, this price must be uniform for each product across the entire province. Pricing thus does not reflect transportation and distribution costs, and is accordingly less efficient. In addition, because brewers can only change prices once each month and, in effect, must signal their competitors of any price changes they are proposing, competing firms are given ample opportunity to match the price changes. The ability to react to competitors' price movements increases pressure for uniformity as brewers converge to a common price. What appears to the public to be a conspiratorial pricing strategy is really the result of the LDB regulations requiring advance notice of price changes and the resulting competitive responses. Such advance notice removes short-run competitive gains that "surprise" price changes usually bring. The once-per-month requirement further detracts from the ability of firms to engage in short-run promotions; having to run promotions for an entire month can become too costly. Uniform province-wide prices also take away the competitive initiative brewers need to establish their brands in highly localized submarkets by combining local price changes with vigourous local promotional activities. Taken together these restrictions on the movement of prices in the province place significant barriers in the way of creating a truly competitive environment. In comparison with traditional markets where manufacturers can change prices as frequently as they desire and in whatever locations that they choose, the British Columbia pricing system is an important restraint on competition.

A traditional competitive market for beer would find the following in effect. First, there would be noticeable price variation for the same product in different locations. Second, there would be frequent use of discounts and promotional campaigns to establish new beers or increase market share for existing beers. Third, over time brands would cluster roughly into four major groups: a super-premium price level, such as that which includes high price imported beers; a premium price level for high quality domestic beers; a regular price level for beers with an image of standard quality; and finally a discount price level for promotional brands and generic beers. Such market segmentation is indicative of a normally functioning market, where brewers direct their products to well-defined market groups with preferences for brands in each price/quality range. Creating such segmentation requires the strategic use of all "4 P's" combined into aggressive marketing programs. The traditional absence of such segmentation in British Columbia is an indication of the existence of impediments to competition within the brewing industry. The recent appearance of price dispersion and the early signs of market segmentation is indicative of the beginnings of more competitive behaviour among brewing firms. To enhance competition and establish greater spatial and brand dispersion requires a considerable relaxation of barriers to competition.

The Regulation System

Beer contains an intoxicating substance, alcohol. Prolonged, excessive use of beer imposes significant costs on the user and on society. Accordingly, its use has been regulated to protect the public interest, since society bears much of the cost of treatment of individual alcoholics and of accident victims of intoxicated drivers.

Regulation of the brewing industry covers every stage of production, distribution and consumption. The provincial government licenses breweries and taxes their output. The federal government levies both an excise tax on gallonage and a sales tax on value of production, and regulates interprovincial movements and importation of beer and other alcoholic beverages. One federal excise rule prevents breweries from selling directly to the public; a public roadway must separate a brewery from a retail outlet where its beer can be sold. This seemingly innocuous restriction, in fact, severely limits cottage brewing in Canada, and impairs competition as a result.

The distribution and retailing of beer are tightly controlled in British Columbia, as previously discussed, by two separate provincial agencies. The Liquor Distribution Branch (LDB) regulates retail sales through its stores and establishes the pricing mechanism and the uniform pricing requirement. The LDB further restricts point-of-purchase advertising and promotions in its outlets. The Liquor Control and Licensing Branch (LCLB), the complementary agency to the LDB, is responsible for licensing establishments that sell beer by the glass or bottle to the public for on-premise consumption. It also oversees advertising to ensure that advertising complies with LCLB-established guidelines, intended to promote moderation and to avoid glamourizing alcoholic consumption.

Over time, societal attitudes toward alcohol have changed markedly. The regulations established and enforced by the LDB and the LCLB have changed to reflect an increasingly liberal view on consumption of alcoholic beverages. In particular, the LDB has sought to provide more and better stores to give customers higher quality service and greater choice. In tandem, the LCLB has provided for the establishment and proliferation of neighbourhood pubs, and has allowed consumption of beer at sporting events (as long as paper cups are used). More flexible rules for advertising and promotion and opening and closing hours, as well as relaxed rules covering entertainment, have been put into force.

The evolution of LDB and LCLB policies over the past six or seven years has clearly reflected changing societal attitudes and preferences relating to alcohol consumption. It has enabled consumers to enjoy greatly expanded choices, both in terms of brands available and locations where alcoholic beverages can be consumed. However, the remaining regulations when taken together have significantly restricted competition, as discussed previously.

One regulation that has not been discussed, and one which is extremely important in buffering local breweries from competitive forces, is the requirement that all domestic beer sold in British Columbia must be produced in British Columbia. Paradoxically, while people in the State of Washington are able to enjoy such well-known eastern Canadian beers as Moosehead, we in British Columbia cannot, since Moosehead is not produced in British Columbia. This requirement, while politically understandable as an effort to keep brewing jobs in the province, shelters the brewing industry from outside competition. It also allows government and labour to extract much of the profit in brewing since the breweries cannot move to areas with lower labour costs or lower taxes, and maintain any market in the province of British Columbia. Given this requirement, and all of the other restrictions on marketing and production and distribution of beer in British Columbia, it is not at all surprising that there is less competition than in industries which operate without such enormous restrictions. Provision of a less protected and more flexible regulatory environment, as proposed in chapter 13 of this report, should greatly promote competition to the benefit of the British Columbia public.

A Review of the Findings II: Data Analysis and Empirical Findings (PART TWO)

In Part Two we analyzed the data base assembled in the course of our work. The principal findings of the analysis are summarized below.

Prices of Beer: Changes Over Time and Comparisons with Other Provinces

Beer prices in British Columbia over the post-War period from 1946 through to 1982 have risen at about the same rate as beer prices across Canada (3.85 percent per year in B.C. vs. 3.86 percent per year in Canada). However, since 1972 the rate of beer price escalation in British Columbia has increased; for the ten years 1972-1982 beer prices rose at an average annual rate of 10.77 percent for each year of the decade, compared with a Canada-wide average annual increase of 9.42 percent. Moreover, British Columbia recorded the highest rates of increases of any province over this period.

Accompanying these increases in prices to the consumer were changes in the revenue share of the provincial and federal governments. Provincial governments, particularly the British Columbia government, enjoyed increased revenues from beer sales; provincial revenue per two dozen bottles of regular beer increased more rapidly than did the retail price. Federal taxation revenues for the same two regular bottles of beer did not rise as quickly as did beer prices. Finally, breweries, and particularly those in British Columbia, continued to receive a constant or slightly smaller proportion of the sales price; their revenues per two dozen bottles of regular beer increased at approximately the same rate as the retail price.

Of particular interest to this report is the behaviour of the prices of individual brands since beer prices were allowed to be set by the breweries in March 1982. In the 18 month period 4 March, 1981, to 3 November, 1982, there has been a rather dramatic dispersion of beer prices. There has also been a dramatic increase in the rate of price movements. In March of 1981 there were only three different prices for beer, prices which varied according to the alcoholic content of the beer. By 3 November, 1982, there were nine different prices for regular beer and a total of twelve different prices for all brands. The dispersion in prices (difference between highest and lowest prices) also increased from $1.15 to $1.60 over these 19 months. Moreover, at the lowest end of the price spectrum prices have risen $1.15 cents per dozen from $5.30 to $6.45 during this period, while at the high end prices have risen by $1.70. Market segmentation, as discussed in Chapter 4 on "Marketing", appears to be taking place. The number of price movements has also increased greatly, especially during 1982, in part reflecting the inflationary environment, and in part reflecting the efforts of the breweries to develop successful pricing strategies and adjust the position of their brands in the market place.

While British Columbia beer prices lagged behind the Canadian average for much of the post-war period, they have risen more rapidly during the past decade. Overall, beer prices in British Columbia have risen at just about the same annual rate as the Canadian average since 1946, implying that recent price increases have allowed B.C. breweries to "catch up" with the rest of the country. One would also have to conclude that the policy of "open pricing" has been successful in achieving price dispersion and the beginnings of market segmentation.

Costs and Profits in the Brewing Industry

Our analysis of costs associated with the brewing industry both in British Columbia and across Canada revealed that during the past five years (the years for which we have detailed cost data provided in confidence by the breweries), the costs of producing and distributing beer have soared. Aggregate costs per hectoliter (including production, distribution, federal taxes, marketing and other related costs) increased by 51 percent between FY1978 and FY1982 across Canada. In British Columbia these same costs rose by 56 percent during the same five-year period (averaged over all breweries). These cost increases compare with price increases for regular beer of 69 percent both across Canada and in British Columbia during the same 1978-1982 time frame. Profitability in the B.C. brewing industry over this period increased from 1.0 percent, one tenth the Canadian average, to 3.7 percent, still less than half the Canadian average. It seems quite clear from these data that the breweries, particularly those in British Columbia, were operating under considerable cost pressure in the 1970's and early 1980's which squeezed their profit margins. The new open pricing policy put into effect in 1981 has allowed B.C. breweries to partly recover from this profit squeeze.

This supposition is borne out when profit margins are examined. While the brewing industry is generally quite profitable, particularly in Ontario and Quebec, industry profit levels in British Columbia are substantially lower. More importantly, this low level of profitability has been in effect for the entire last half of the 1970's. This is not surprising when we remember that beer price increases were severely limited through 1970, putting a revenue squeeze on the industry.

When costs and profits are analyzed together, no evidence can be found that the brewing industry has been making monopoly or oligopoly profits over the recent period of rapidly rising prices. Instead, price increases were keeping up with increasing costs of operation, government taxes and markups.

Brewing Industry Structure: Market Share, Plant Size and Competition

The structure of the brewing industry in Canada and in British Columbia is highly concentrated and growing more so over time. Not only is the industry typified by large brewing companies with national marketing scope, but the production process also appears to be increasingly dominated by larger and larger plants. This is apparently due to the existence of economies of scale in both production and marketing. Growing concentration and increasing plant sizes, because they allow firms to achieve lower costs, need not be inconsistent with the public interest. Lower costs and greater competition for market share have resulted in the United States, where concentration has also increased dramatically, and where competition seems to be extrememly intense among the market leaders, Anheuser-Busch and Miller. For similar competitive pressures to be maintained in the Canadian and British Columbia brewing industries, a key requirement is that it be possible for new firms or products to enter the market. Barriers to entry exist because of the large scale economies. To build large breweries to capture these scale economies in both production and marketing requires large capital outlays. Barriers are also provided by both Canadian and British Columbian governments through the requirement that beer be produced in the province in which it is to be sold. The extremely high markups on imported beer effectively preclude this form of new entry and therefore block this source of competitive pressure. Finally, restrictions on marketing and promotion also make it difficult for new products to gain a foothold in the market. Without the threat of new entrants, the oligopolistic structure of the brewing industry can lead to slackened competition. Eliminating potential entry does not serve the best interests of the public, as it diminishes the likelihood of competitive prices and a wide choice of products. Ease of entry and access to the British Columbia beer market is essential if the industry is to maintain its current competitive thrust.

Constraints Facing the Brewing Industry

The brewing industry in Canada, and particularly in British Columbia, faces constraints which are likely to influence competition in the industry of the future. First, consumption of beer has been virtually stable over the past six or seven years, marred only by periodic strikes either in the brewing industry or in the beer distribution system. Given the aging of the Canadian population and the lack of future growth of the 25-35 age group it is unlikely that these consumption figures will be reversed. (While the 25-35 age group grew by 46 percent during the 1970's it is anticipated that it will grow by only 19 percent during the 1980's.) Beer is also facing stiff competition from other alcoholic beverages, particularly wine; per capita consumption of beer increased by only 39.5 percent between 1960 and 1981, wine consumption per capita increased by 322 percent during the same 21 years, and spirit consumption grew by 123 percent over the period.

In addition to competition with other alcoholic beverages and changing demographic patterns, changes in consumption patterns among beer drinkers have further affected the industry. Trends toward increased consumption of packaged beer and decreased consumption of draft beer in all provinces save British Columbia, and the trend toward an increased demand for lagers as opposed to heavier ales, except in Quebec, Newfoundland and Nova Scotia are noteworthy. Competition from imports does not appear significant; foreign beer has not made substantial inroads into the Canadian market, with the exception of strike years when domestic beer was unavailable in Western Canada. In contrast, the export market does present a major avenue for future sales expansion; exports, primarily to the United States, have risen to the point where they constitute nearly nine percent of the total sales of the Canadian brewing industry.

Two other constraints are important for the demand for beer. First, demand appears to be unrelated to the level of income, so that future changes in income will not affect the overall demand outlook. Similarly, several studies have shown that the demand for beer as a whole is relatively independent of the price of beer, and that price increases will not likely have major adverse affects on the level of demand. (Of course, the demand for a particular brand of beer is much more price-responsive.) The recent recession and rising prices have combined, however, to produce vocal consumer resistance to price increases, somewhat at odds with the historical situation.

Finally, demand is highly seasonal. The three summer months (June, July, August) in 1981 recorded sales of 32 percent of the annual total. Sales rise to their May or September level. This seasonal demand pattern, combined with the perishability of beer, means that excess capacity to produce beer must be carried by the industry for much of the year, accompanied by significant financing costs.

Changing Government Regulations

Our last set of constraints facing the brewing industry were those imposed by the various levels of government. Here we saw that public attitudes toward the consumption of alcholic beverages have been relaxing steadily over the past decade or two. British Columbia has been the most dynamic province in this respect, and has made fundamental changes in both the rules relating to retail distribution, marketing and licensing, and those relating to pricing. There is every expectation that continued liberalization of attitudes and regulations is in the offing, removing from the industry some of the constraining forces which have prevented it in the past from exploring the full range of competitive tools typical of most consumer products industries.

Conclusions

Despite the recent implementation of an "open pricing" system for beer, it is evident that there still exists an enormous range of impediments to truly competitive behavior in the British Columbia brewing industry. These barriers are present in every aspect of the marketing process, from product packaging and distribution, to promotion and pricing. However, constraints on competitive promotion and pricing are the most significant. In these areas the innovative entrepreneur is faced with an array of obstacles effectively barring active competition. Almost without exception, these difficulties are the result of government policies and regulations.

Brewing industry cost data does not contain evidence of excessive profits, collusive and/or monopoly practices, or significant differentials in production costs among the breweries in the province. In fact, firms face remarkably similar costs, particularly for labour (the three major B.C. breweries have common wage rates), and for major inputs such as malt, hops, water and energy. Thus, our attention naturally focused on the role of government in the brewing industry as the principal source of the barriers to competition. We must conclude, therefore, that effective competition can only be achieved in the brewing industry if there are major changes in government policy with respect to the production, distribution and marketing of beer.

Our conclusions should in no way be construed as placing blame on or questioning the motives of the three principal actors in the brewing industry (the breweries, the LCLB and the LDB), all of whom have a deep concern for the public interest. For example, LDB rules against regional variations in beer prices, and against changing draft beer suppliers more than twice a year, are both rooted in the sincere efforts of these agencies to protect the public. As a result of these regulations, however, the public interest is adversely affected by lessened competitive pressure on the breweries. Similarly, the belief that the public interest is best served by providing high quality relatively uniform products in the recyclable and economic "stubby brown bottle" causes diminished competitive effort in promotion and product innovation. In each instance the public interest is very much a concern; however, this interest is most often defined in traditional terms rather than in terms of expanded public choice, competition and innovation, and cost minimization. In the remainder of this chapter, to summarize, we will return to the six questions initially posed by the Minister in his letter of appointment on 26 February, 1982. The final chapter of this report contains our specific recommendations.

With respect to the Minister's questions we can conclude the following:

1. To what Extent Has Price Competition in Fact Taken Place?: Price competition has taken place to a surprisingly large extent given other existing impediments to competition.

2. What Are the Prospects for Greater Price Competition in the Future?: The prospects for price competition are very great indeed if the recommendations se out below are incorporated in public policy.

3. What Are the Barriers to Greater Price Competition?: The government policies which restrict competitive activity and prevent the breweries from utilizing the entire spectrum of possible competitive weapons in the market system constitute the most significant barriers to price competition.

4. How Does Price Competition Among Brewers in British Columbia in the Last Year Compare with the Level of Beer Prices and the Level of Beer Price Competition in the Other Provinces?: British Columbia fares very favourably by comparison. There has been a general increase in beer prices across Canada, and while British Columbia prices have increased much more frequently and on average more rapidly in the past 18 months, British Columbians also enjoy a

range of prices not enjoyed by citizens of other provinces. At the low end of the price spectrum, price increases have been well below those in other provinces.

5. Assuming Existing Government Policies in the Various Provinces Remain Constant, How Do the Prospects for Beer Price Competition in British Columbia Compare with Prospects in Other Parts of Canada?: The prospects in British Columbia appear more favourable for price competition than in the other parts of Canada, based on the experience in British Columbia since 4 March, 1981. These prospects are even more favourable if further relaxation of government restrictions is combined with the "open pricing" system.

6. What Further Steps Can the Provincial Government Take Through its Liquor Distribution Branch to Further Encourage Beer Price Competition in British Columbia (consistent with maintaining reasonable job security in the British Columbia brewing industry)?: Quite a few steps can be taken to further the competitive processes in the brewing industry while maintaining reasonable job security. These steps necessitate changes in both the regulations of the Liquor Distribution Branch and the Liquor Control and Licensing Branch, and constitute the substance of the final chapter of this report.

Chapter 13

Recommendations

In this final chapter we build on the analyses and information of the preceding chapters to set out a broad range of recommendations, directed toward the promotion of competition in the brewing industry in British Columbia. The benefits of competition are traditionally conceived by economists to encompass the following:

1) Maximum consumer choice,
2) Maximum efficiency of production and distribution,
3) Minimum costs and prices in each market segment.

As suggested in the previous chapter, significant strides have already been made to promote competitive behaviour in the British Columbia brewing industry. These gains have been made through a relatively modest change in the pricing mechanism. Our earlier review of marketing strategies suggested that truly competitive behaviour requires a mix of elements, and that the present system for pricing, marketing, and producing beer in this province is not conducive to innovation and competition.

Let us stress again, however, that our recommendations are not rooted in any belief that present actors (the breweries, the LCLB and the LDB primarily) are operating outside their best estimate of the public interest. Rather, the public interest has not been broadly defined. As examples, LDB rules against point-of-purchase advertising or against promotional gifts are both designed to protect the public. However, in the process, competition is reduced and the public interest is undermined. The public interest is very much in the minds of the respective actors; however, this interest all too often is defined in terms of the status quo, failing to acknowledge the innovations necessary to expand public choice and promote competition.

The following recommendations are intended to remove many existing barriers to competitive behaviour in British Columbia. The hope is that by removing these barriers, and replacing them with more flexible rules and regulations, competition can be promoted, and the search for new products, production efficiency and marketing strategies can proceed.

The recommendations have been separated into functional categories; we address, in order, the production, distribution and marketing of beer. The recommendations are further divided into those with implications for the revenues of the Province of British Columbia and those with no apparent revenue implications. The regulations for which changes are recommended also set out at the conclusion of each functional category.

A. Production

1. Recommendations with No Apparent Implications for Provincial Revenues

a. Encourage New Breweries to be Established in British Columbia

The encouragement of new breweries can take several forms, and each alternative should be explored by the Minister. First, importation of beer produced by Canadian breweries not located in B.C., not presently allowed, should be encouraged under certain conditions. If the producer of the newly imported beer agreed, upon achieving predetermined market shares, to invest in breweries in British Columbia, competition could be improved without threat to B.C. brewing employment. This policy could be extended to include foreign breweries as well, although the Foreign Investment Review Agency might slow the process sufficiently to prevent quick implemention of this scheme. Secondly, new breweries could be encouraged through more flexible policies on the part of the Liquor Distribution Branch and the Liquor Control and Licensing Branch. These policies would make it easier for new entrants into the marketplace to get their product in LDB stores or into licensees by lessening or removing current restrictions on store listings and on draft beer supplied to licensees.

A third class of policies would encourage "cottage" breweries. Such breweries are characteristically quite small, and are generally closely affiliated with a neighbourhood pub. The output of the brewery is sold directly through the pub. An example in British Columbia is the Horseshoe Bay Brewery, which is restricted to selling its beer in draft form through the Troller Pub in West Vancouver's Horseshoe Bay. The total output of this brewery is roughly 1500 hectolitres per year, compared with the approximately 1,000,000 hectolitre capacity of the Molson Brewery in Vancouver. Individual cottage breweries cannot seriously affect competitive behaviour, but, if encouraged by government, cottage breweries could be created in numbers sufficient to provide some competitive pressure on larger brewers. More importantly, they would provide the public with wider choice than is presently available.

The sort of encouragement that would be needed includes an increase in the willingness to grant brewery licenses on a larger scale than the single prototype license issued to date. It also would entail a rethinking on the part of the Liquor Control and Licensing Branch of its taxation and regulation of breweries in the province. Uniform standards and and licensing fees are in effect for all commercial breweries. This places the cottage breweries at a disadvantage, since their small scale of operation makes it difficult to absorb these fixed costs -- taxes, fees and administrative procedures imposed by government. Uniform regulations have a disproportionate affect on such small breweries. Accordingly, consideration should be given to the establishment of special rules and regulations for small breweries, perhaps those with output of less than 20,000 hectolitres per year, to enable these breweries to be established in the province. Such rules and regulations must keep in mind the special problems faced by small businesses in general, and small-scale brewery special problems faced by small businesses in general, and small-scale brewery operations in particular, to allow these small brewing operations to survive.

We are not suggesting that there be any explicit or implicit government subsidy to such operations, but only that regulations be promulgated which are sufficiently flexible so as not to disadvantage these cottage breweries. Allowing the breweries to sell for off-premise consumption and to licensees aside from their principal pub should perhaps also be encouraged through appropriate regulation and licensing. Federal excise restrictions which prevent breweries from selling directly to the public should be investigated, and the influence of the province employed to remove such seemingly senseless restrictions.

b. Encourage the Use of Aluminum Cans

Canned beer constitutes roughly three percent of total packaged beer production in Canada. Cans have recently accounted for much as ten percent of packaged beer sales in British Columbia during periods of peak summer consumption. In the United States it is estimated that as much as two thirds of beer consumed by the public is in aluminum cans. The steel-walled aluminum-top can used in Canada is inefficient for two reasons. First, it is completely non-recyclable; the mixture of steel and aluminum make the can impossible to melt down and reuse. Second, the can is heavier than the all-aluminum can, and so is more difficult to crush for waste disposal and more costly to cool. These features argue for the switch to all-aluminum cans; such a switch would reduce beer handling and bottle-return costs, and increase consumer convenience. The all-aluminum cans could also be easily crushed, enabling the LDB to remove any restrictions on the return of such cans, and adding further incentive for public and producer acceptance of these cans.

Encouragement of aluminum cans might take the form of higher deposits on aluminum/steel cans. The deposit might be raised to $2.40 per dozen on these cans, while all-aluminum cans continued to have a $1.20 per dozen deposit. In addition, LDB stores could allocate more space and allow point-of-purchase promotion for all-aluminum cans. (Parallel premium deposits on aluminum-steel soft-drink cans would further encourage the development of aluminum can manufacturing facilities in the province, likely reducing can costs and encouraging further switching to all-aluminum cans, both from steel-aluminum cans and from the well known "stubby brown bottle".)

c. Encourage Competitive Inputs

Breweries operating in British Columbia face restrictions which reduce the competitiveness of inputs into the brewing process. An obvious example is the requirement to buy malted barley at prices established by the Canadian Wheat Board, which prevents all brewers in Canada from purchasing malt at the most favourable price available on world markets.

Entrepreneurial inputs may also be indirectly restricted. Many of the regulations covering promotion and pricing severely restrain active competition. Such restraints may make the brewing industry less attractive to entrepreneurs. Removing or greatly reducing these restrictions (to be detailed in subsequent recommendations) could serve to encourage the flow of entrepreneurial talent into the brewing industry, and to increase competition.

Finally, the supply of labour is not competitive. The restriction that only Canadian beer brewed in British Columbia be sold here effectively provides organized labour with a monopoly position; breweries do not have the option of moving their productive facilities to areas where more favourable labour inputs can be obtained. (All Canadian provinces have similar strictures against importing domestic beer from other provinces. British Columbia's isolation at the extreme western end of the country makes these strictures particularly binding). Labour costs are a major component of the costs of producing beer, and wages in the British Columbia brewing industry are among the highest in Canada. Without the protection of the restriction on interprovince beer sales, a more competitive labour market could develop. The creation of small cottage breweries would provide for an alternative production regime which could draw its labour supplies from competing sources. This would also be a small step in the direction of opening up the labour market to competition. Some easing of the present rules seems desirable, even if, at first, Canadian-produced beer was only imported at markups in excess of British Columbia-produced beer.

2. Recommendations with Apparent Revenue Implications

There were no recommendations as to beer production that carried with them any obvious revenue implications for the Province of British Columbia.

3. Regulations that Require Changes

Brewing is regulated by two principal Acts of the Provincial Legislative Assembly, as discussed in Chapter 7: The Liquor Distribution Act; and The Liquor Control and Licensing Act. In each instance the Act provides for the development of published regulations and rules to implement the respective Act. Rules, orders and policies of the General Managers of the Liquor Distribution Branch and of the Liquor Control and Licensing Branch are less formal and subject to greater flexibility. We will deal here only with the changes required in the relevant Acts and published Regulations. Where current policies or practices require change, but these changes necessitate no change in either the relevant Act or its Regulations, these will be noted as well. Such policy changes are the easiest to implement and will be stressed.

a. Liquor Distribution Act

No changes appear to be needed under this Act. The General Manager is provided with great flexibility and scope for policy making, and has the latitude to accommodate the suggestions set out above. The Act presents no barrier to implementing the recommendations.

b. Liquor Control and Licensing Act

Overall, the previous comments are applicable to the powers vested in the General Manager of the Liquor Control and Licensing Branch as well as the General Manager of the Liquor Distribution Branch. Flexibility is adequate to accommodate the encouragement of new production facilities in the province. However, there are certain facets of the Liquor Control and Licensing Act which are impediments to smaller-scale cottage breweries discussed above. There is sufficient latitude in the Act in determining licensing fees and procedures to allow the General Manager to develop fee structures to promote smaller breweries. However, the restriction on "tied houses", licensed premises that are owned or operated by a producer of alcoholic beverages (Section 18), would need to be changed to allow for the development of on-site production for cottage breweries as is popular in the United Kingdom. On-site production could lower the costs of cottage brewing by eliminating transportation costs, allowing the beer to flow directly from storage to the pub. The nature of the "tie" could be specified in new legislation, perhaps restricting ties to breweries with less than 5,000 hectolitres of annual production. The possibility of such tied houses for cottage breweries and their associated pubs would also necessitate some changes in Section 65 "Duty to Report and Pay Taxes", and Section 66 "Taxes Additional to Other Taxes", so that the special situation of such small breweries and their outlet(s) could be encouraged.

c. Liquor Control and Licensing Act -- Regulations

Present regulations would appear sufficiently flexible to absorb the recommendations set out here. The only exception may be the licensing fee set out in Section 26 "Licence Fees for Distilleries, Breweries and Wineries". Greater flexibility here could be used to encourage the establishment of small breweries, and perhaps even larger breweries at their inception.

B. Distribution

1. Recommendations with No Apparent Implications for Provincial Revenues

a. Wider Distribution of Bottles and Cans: No Change in Present Liquor Distribution Branch Markups (Malt Levy) and Retailer Free to Set Retail Price

Wider distribution and availability of beer through additional outlets seems to be very much in the public interest. A major stumbling block to wider distribution in the past has been the potential loss of LDB revenues should beer be sold through other retailers, necessitating a discount from LDB to these retailers. While such a state of affairs may come to pass, and is treated subsequently, the present recommendation avoids revenue implications by suggesting that other retailers be allowed to purchase beer at LDB prices (i.e., with the full markup) and resell it at whatever price they consider feasible. Such retail sales should be restricted to hotels and supermarkets. This restriction is seen as desirable and in keeping with the need to monitor sales of alcoholic beverages to minors. Hotels already have considerable experience in monitoring such sales, while large supermarkets, with, say, 15,000 square feet of selling space or more, are big enough to maintain a sales staff able to enforce restrictions on sales to minors. The return of bottles and cans at these outlets should also be readily accomplished, with no limits on returns, since both hotels and supermarkets have considerable experience in the return of empty beverage containers. Whether the beer is sold cold or at room temperature, the retail price should be left entirely to the hotel or supermarket.

This recommendation could easily be extended to include the proposal by the brewing industry to establish industry-owned and operated outlets analogous to

Brewers Retail in Ontario. However, in view of the capital requirements of developing such a system it is unlikely that the brewing industry would want to consider such a move without the ability to purchase beer at a discount from the LDB retail price. Moreover, the existence of competition from hotels and larger supermarkets might also make industry-owned and operated stores uneconomical. Despite these caveats, should the industry still want to move into retailing with the requirement that they buy at full LDB markup prices, then we would support their inclusion in a wider distribution network such as that proposed here.

b. Permission for Licensees to Sell as Many Brands of Draft Beer as They Choose, Including the Importation of Foreign Draft Beer

We see no reason why the public should be restricted to a limited choice of draft beers. Licensees handling draft beer should be able to handle as many brands from as many different breweries as they choose. Restrictions on the number of times a year that licensees can change suppliers (currently only twice per year) should either be dropped entirely or eased greatly to allow more frequent changes. Finally, foreign draft beer should be allowed into the province at present LDB markups for other imported beers. Changes in the pricing of beer will make the importation of draft beer equitable for British Columbia breweries who rightly object to the idea at present. It is expected that importers would only serve dense urban markets, whereas under present regulations brewers must serve the entire province at uniform prices. By allowing for differential pricing of beer in different markets, prices will be allowed to reflect cost differences. Local breweries will then be able to price more selectively, and therefore compete more effectively against foreign producers.

c. Bottled and Canned Beer Should be Time Dated

With wider distribution of beer in bottles and cans, the public needs to be able to assure itself that the quality of beer is maintained. Beer is a perishable, and has a recommended shelf-life of 90-120 days. Accordingly, the public should be able to ascertain easily the age of the product that they are buying.

d. Provide for Bulk Distribution of Draft Beer to Licensees

In both Europe and the United States the bulk distribution of beer is becoming more widespread. Beer is delivered in large quantities by tank trucks to licensed establishments where it is held in storage tanks and pumped directly into the pub, avoiding the intermediate keg. This system is attractive because of the savings in shipping and packaging costs that result from the ability to provide licensees with beer without having to keg it. Bulk distribution also reduces costs to the brewery, since much of the storage capacity now required to complete the aging process can be eliminated. Aging tanks can be decentralized to the licensee's premises, saving the breweries expensive capital requirements. Lower costs and a fresh product are clearly in the public interest, and the low cost and convenience of bulk distribution should encourage larger licensed establishments to consider converting to such a scheme.

2. Recommendations with Apparent Revenue Implications

a. Wider Distribution of Bottles and Cans With Discounts to Retailers by the Liquor Distribution Branch

Recommendation B.1.a. suggested the development of a wider distribution system to include outlets other than LDB stores. The present recommendation goes farther in suggesting that the Liquor Distribution Branch sell beer at a discount to other retailers, potentially including hotels, supermarkets over

15,000 square feet, and brewing industry owned and operated stores. If discounting is permitted, these other retail outlets would constitute more significant competition to the LDB and the revenue implications of such competition could be substantial.

Unfortunately, it was impossible in the course of our inquiry to analyse the revenue losses which could result from allowing the sale of beer through other retailers. This inability to forecast revenue implications stems from two sources: 1) inability to estimate the cost savings to the LDB of alower beer sales volume; and 2) inability to forecast the amount of redistribution of sales to these competing retailers. The first point is particularly critical; revenue losses could be more than offset in many circumstances by cost savings resulting from LDB store reductions in retail and storage space now required for beer sales and inventory and for the return of empties. Without an accurate estimate of the LDB costs involved in selling beer and accepting empties, it is virtually impossible to assess the revenue implications of this recommendation. Accordingly, a corollary to the present recommendation is that the Liquor Distribution Branch engage qualified accounting services to develop the requisite cost information to evaluate the revenue implications of allowing direct competition with LDB stores.

Estimating the loss of customers to competing retail outlets, would also be difficult. Short of an extensive consumer survey as to likely changes in beer shopping habits under an expanded distribution system, there is very little direct estimation possible. Evidence is available from Washington State that may give some indication of the impact. When wine was allowed to be sold at both Washington State Liquor Stores and through groceries, specialty stores, and supermarkets, liquor stores wine sales fell from 100 percent of the market in 1969 to 17 percent in 1982. This occurred even though Washington State stores sell wine at slightly lower prices. A switch of such magnitude would be highly unlikely in British Columbia, since the competing retail network would be much smaller; no small groceries or specialty stores are involved in the present recommendations. Moreover, this shift occurred over a thirteen-year period in Washington; a similar evolution could be expected to occur here.

Finally, implementation a wider distribution network with discounting by LDB would require that the malt levy be assessed slightly differently. Instead of having the LDB markup assessed on the wholesale cost to the LDB, a uniform wholesale cost could be established for all retailers and the final markup set against this uniform cost. More desirable still may be a malt levy system based on volume of throughput, allowing the breweries to change their wholesale cost to suppliers for sales promotions. The present markup system based on wholesale prices would be difficult to operate if different wholesale prices were allowed for different retailers. However, this is a small technical detail and should in not stand in the way of the larger idea embodied in this recommendation, the expansion of choice and competition at the retail level.

b. Improvement of Liquor Distribution Branch Stores for Better Handling of Beer and Returned Empties

Even in the absence of heightened retail competition, the Liquor Distribution Branch could improve its retail facilities to enhance the marketing of beer. The improvements we discuss entail capital outlay and/or a possible increase in sales revenues, and have been included in this section as a result. The public has not been well served by LDB stores in two principal aspects. First, limits on the return of empties is a significant inconvenience to the beer-consuming public. Consumers often must use bottle depots to return large quantities of bottles. This imposes additional costs on consumers, both because it requires an additional trip, and because there is a loss of deposit refunds;

depots generally do not refund the full deposit. Second, beer cannot be purchased cold from the LDB, a convenience of some value to the public judging by the popularity of the practice in jurisdictions which allow provision of cold beer. To remedy these situations would require capital expenditure on refrigeration units and expanded storage space for empties. However, to accurately assess the implementation of these changes would require accurate cost accounting information; only then can the LDB estimate potential revenue gains from such innovative marketing ideas.

A further difficulty is encountered at many LDB stores in delivering beer and picking up empties. Small storage areas and inappropriate designs often lead to unnecessary cost, as discussed earlier in this report. To keep distribution costs down, the LDB should consider redesigning the stores to be more efficient for delivering beer, maintaining appropriate inventory, and recycling empties. Again, better cost accounting, both by LDB and by the beer distributing agencies, is required so that the full costs of the present system and the impact of proposed changes can be assessed, and remedial measures taken.

3. Regulatory Changes Required

a. Liquor Distribution Act

The present Act appears to be quite flexible; all of the changes contemplated above seem to be compatible with the present Act and its Regulations. The powers allocated to the General Manager of the Liquor Distribution Branch (Sections (3), (4), and (5)), and those dealing with LDB stores (Sections (8), (10), (15), and (16)) appear sufficient to handle the recommendations set out above.

b. Liquor Control and Licensing Act

Under this Act the General Manager of the Liquor Control and Licensing Branch has the authority to "restrict the scope and effect of a license or issue it on terms and subject to conditions he may prescribe, and may limit the type of liquor to be offered for sale under a licence" (Liquor Control and Licensing Act, Section 11(2)). The General Manager therefore has the power to allow multiple-draft licensees, without any change in the present legislation. Similarly, under Section 14 of the Act, the General Manager can allow off-premise sales of beer. Finally, under the sections of the Act dealing with licensing of breweries (Sections 55, 56, and 57) the General Manager has the ability to establish rules for the brewing of beer; requiring the readable time-dating of the product and allowing for bulk distribution would appear to fall within these rules. In short, the present legislation appears quite flexible and adequate for implementing the recommendations set out above.

c. Liquor Control and Licensing Act -- Regulations

Here again there appears to be ample flexibility. Increasing off-premise sales outlets and allowing flexibility in markups is allowed under Section 3 of the Regulations. Time-dating can be covered by Section 26 dealing with "Licence Fees for Distilleries, Breweries and Wineries", while bulk distribution can be handled under Section 25 "Delivery". Therefore, neither the present Act nor its Regulations appear to stand in the way of implementing the recommended changes.

C. Marketing

1. Recommendations with No Apparent Implications for Provincial Revenues

a. More Flexible Pricing Arrangements

At least four features of the present pricing arrangements should be changed for there to be appreciable increases in competitive pressure exerted in the market.

i. Price should be allowed to change more frequently than the current once per month. Large retail chains, such as the major supermarkets, change prices once per week so there appears to be no technical reason why the LDB cannot make more frequent, at least weekly, changes. Without such frequency of price changes, as discussesd, it is difficult to have competitive promotions and specials.

ii. Price change annoucements should not be required. The present system of requiring press releases takes away surprise as an important competitive weapon. No changes need be announced in advance for the purpose of competitive responses. Changes should be submitted to the LDB in confidence, with at most a two week lead time (to enable the LDB to make necessary changes of shelf prices).

iii. Prices should be allowed to vary across the province, and regional prices should be set by the breweries. There seems no reason to have uniform prices across a province as large and as varied as British Columbia. The existence of uniform prices takes away competitive advantages for smaller regional breweries. Because of the advantages in shipping costs, these breweries might otherwise be able to establish themselves more firmly in well-defined regional markets near their brewery. Differences in shipping costs are now ignored, essentially leading to a weakening of competitive pressures.

iv. Store-by-store variations in prices should also be allowed within any single region, and short-term promotional specials encouraged on a store-by-store basis. The ultimate flexibility in regional differentials would be allowed by having a store-by-store differential in prices. Such differentials should be encouraged (not only made possible) by the LDB to help enhance the competitive nature of the brewing industry. With store-by-store pricing differentials allowed, breweries could afford to run special promotions in well-defined neighbourhoods and submarkets within the larger regions of the province. There need be no added cost to the LDB for such added flexibility as the breweries could be billed for much of the cost of running such promotions. This is typical in the supermarket business where manufacturers and supermarkets often split the cost of promotional specials. Store-by-store price variation could lead to greater competitive effort and the possibility of heightened competition.

b. More Flexible Promotional Arrangements

As has been stressed throughout this report, it is not sensible to isolate one element of a competitive marketing strategy from all the others. Accordingly, looking at pricing arrangements alone is unlikely to be effective; greater flexibility in pricing should necessarily be combined with greater promotional flexibility.

i. Allow and Encourage Innovative Point-of-Purchase Advertising

Current regulations forbid point-of-purchase advertising in LDB stores and by licensees. We recommend this policy be changed to allow such advertising, so that pricing changes and strategies can be combined with point-of-purchase advertising programmes to inform the consumer of the promotional pricing. The present system makes it difficult to launch new brands or stimulate sales of existing brands; pricing cannot now be combined with advertising at the point-of-purchase where it is most effective.

ii. Allow and Encourage Point-of-Purchase Promotions

There is no reason that we could discern for the current prohibition against such point-of-purchase promotional devices as sports caps, t-shirts, coasters, ashtrays, decorative glasses, etc. We see these promotional tools as being consistent with more innovative marketing strategies and with creating a more competitive environment for the brewing industry. These promotional tools allow smaller brewers to develop effective promotional campaigns in well-defined market areas as alternatives to expensive mass advertising techniques, particularly airwave and large circulation print media. Use of such promotional materials extends the range of marketing devices open to the brewing industry and is compatible with widening the scope for competition.

iii. Encourage Price and Brand Advertising and Promotion

Price is a key element in any marketing mix and a key decision variable for consumers. Accordingly, prices should be widely known to the beer-consuming public. Price information should be encouraged in advertising and promotional material. The Liquor Distribution Branch should either label beer packages the way spirits are labelled, or it should provide large-type price lists displayed prominently on easily visible signboards. Alternatively, the breweries might put large print price labels on each carton as does Old Fort Brewery Ltd.

iv. Promotional Fees and Discounts Should be Allowed

Currently, no promotional fees are allowed to be paid by breweries in promoting their products. We suggested above that promotional fees be charged by the LDB when brewers promote brands of beer in LDB stores. Promotional fees will offset costs to the LDB for such promotions, and are consistent with practices in the supermarkets. Promotional fees should also be allowed for other retailers in an expanded distribution network. Such fees should be closely monitored to reflect costs, and any use of such fees for inappropriate activities, e.g., to entice retailers to stifle competition, should be dealt with harshly through licence suspensions and fines. Discounts to participating retailers should also be allowed (including rebates during promotional periods) to provide breweries with attractive promotional tools to encourage retailers to participate in periodic promotions.

c. Imported Beer

Two points should be made here. First, with breweries free to charge differential prices in different regions of the province (recommendation C.1.a(iii), there is no reason why imported draft beer cannot be admitted to the province for sale only in regions where there is likely to be demand (see recommendation B.1.b.). The rationale for the present policy is that, because local breweries must service the entire province at a uniform price, importing draft beer only into the high density markets (Vancouver and Victoria, for example) would allow foreign producers to skim off the cream of the market. However, with regional price variation allowed, the argument fails. Secondly, the LDB should greatly increase its list of imported beers to provide the public with greater choice, much as it has with increasing the listings of imported wines. In both cases there need be no reduction in LDB markups; local breweries would still enjoy a considerable price advantage and the LDB would realize no revenue loss.

d. The Liquor Distribution Branch Should Be a More Aggressive Beer Marketer

i. The LDB should consider bulk bottling of beer as it has done with spirits.

It was previously recommended that licensees be allowed to receive beer in bulk for on-premise draft sales. Analogously, the LDB could become a packager of beer, receiving beer in bulk shipments. Stroh's Brewery in Detroit, among others, has already adopted this system to avoid the high costs of shipping packaged product into local markets. It is also a natural extension of LDB practice with regard to spirits, sherries and ports.

ii. The LDB should market a generic brand of beer, or perhaps one lager and one ale.

Generic products have found reasonable acceptance in a wide range of consumer items, including the LDB-packaged spirits. Generic beer provides the consumer with added choice at the low end of the market price spectrum, and is a logical extension of the recommendations throughout this chapter, expanding choice and promoting competition. The LDB could seek generic beer on a bid basis, or could set out tenders and receive beer of given specifications from more than one brewery if several brewers should choose to participate. The generic beer could either be prepackaged by the breweries using LDB-designed labels, or the beer could be shipped in bulk to the LDB which would then bottle or can the beer.

2. Recommendations with Revenue Implications Apparent

The only recommendations in this section with revenue implications for the LDB would be those which could involve markup reductions. Such reductions might be considered in promotion of a generic beer, for example, though this would only be feasible given a wider retail distribution system. Otherwise LDB could bebe considered to unfairly promote its own product. The LDB might also choose to cut its present markups on imported beer to expand public interest in imports, particularly if the LDB moves to expand imported beer offerings, including draft imports.

3. Regulations that Require changes

a. Liquor Distribution Act

This Act again appears to provide all of the necessary flexibility to implement the recommendations discussed above. The pricing mechanism, promotional policy in LDB stores, and import beer policy all fall under the purview of the General Manager of the Liquor Distribution Branch as the Act is currently written. Bulk purchase and generic branding similarly fall within the General Manager's sphere of responsibility.

There are two areas of potential conflict under the expanded marketing network and other options discussed here. First, approval of any point-of-purchase materials allowed in LDB stores should be required by the Liquor Control and Licensing Branch General Manager. Close cooperation is needed to ensure that consistent guidance and regulations are given the breweries from the respective General Managers of the LDB and the LCLB. Second, the LCLB is responsible for licensing breweries while the LDB is responsible for obtaining provincial markups and overseeing pricing behaviour. Again, consistent and fair practices need to be followed by both branches to provide the kind of even-handed regulatory environment within which competition can flourish in the province.

b. Liquor Control and Licensing Act

In general the present Act provides sufficient flexibility and scope for action by the General Manager so that many of the recommendations can be implemented with little difficulty. There are several areas however, where legislative change is required to implement the foregoing recommendations. First, as previously mentioned, Section 18 dealing with "tied houses" will have to be relaxed if cottage breweries are to be a potentially significant element in the marketing spectrum available to consumers. More importantly, the entire range of advertising and promotional activities recommended above require legislative change. Specifically, point-of-purchase advertising and promotion is severely restricted by Sections 49 ("Display of Signs"), 51 ("Soliciting Orders for and Advertising Liquor"), 52 ("Agents"), and 54 ("Sponsored Events"). These will have to be made considerably more flexible to enable implementation of the more competitive marketing environment recommended above.

c. Liquor Control and Licensing Act -- Regulations

As with the Act itself, the regulations promulgated under the Act are generally quite flexible and capable of being adapted to the present recommendations. However, once again the area of advertising and promotion requires a minor change in the regulations. Section 24 of the Regulations, "Advertising", deals with both advertising and the distribution of promotional literature in licensed establishments. While more liberal advertising restrictions would help promote the kind of competitive behaviour sought, the advertising regulations do not, in general, hinder competitive behaviour, but can be seen as protecting the public from offensive advertising campaigns and messages. However, Sections 24(11) and 24(12) seem to be overly stringent. Section 24(12), in particular, greatly restricts point-of-purchase advertising in licensed premises. This appears to be at odds with the previous recommendations, and would need to be changed.

Finally, we reiterate that close coordination is needed between the Liquor Distribution Branch and the Liquor Control and Licensing Branch if a balanced, competitive environment is to be developed for the brewing industry in British Columbia. Areas where responsibilities overlap need to be clarified, and consistent policies put forward to enhance competition in the brewing industry, and to promote and protect the public interest.

Appendix 1

List of People Interviewed

1. Mr. Al Branston
   General Manager
   Carling-O'Keefe Breweries (B.C.) Ltd.
   Vancouver, B.C.

2. Ms. Jill Bodkin
   Deputy Minister
   Ministry of Consumer and Corporate Affairs
   Province of British Columbia
   Victoria, B.C.

3. Mr. Bob Branham
   Former Director of Store Operations
   Liquor Distribution Branch (retired)
   Surrey, B.C.

4. Dr. Heinz Buchbinder
   President
   Amstel Breweries Ltd.
   Hamilton, Ontario

5. Mr. Jack Butterworth
   President, B.C. Hotels' Association
   Hotel Owner
   Vancouver, B.C.

6. Mr. Bill Chisholm
   Brewing Industry Analyst
   Loewen, Ondaatje, McCutcheon and Co. Ltd.
   Toronto, Ontario

7. Mr. Paul C. Cramton
   Divisional Administrative Manager
   G. Heileman Brewing Company Inc.
   Seattle, Washington

8. Mr. Lawrence Dyer
   Director of Finance
   B.C. Liquor Distribution Branch
   Vancouver, B.C.

9. Mr. Tex C. Enemark
   Former Deputy Minister
   Ministry of Consumer and Corporate Affairs
   Province of British Columbia
   Vancouver, B.C.

10. Mr. Ed Faulk
District Manager
Rainier Brewing Company
Seattle, Washington

11. Mr. Arthur Fouks, Q.C.
Counsel
British Columbia Brewers Council
Vancouver, B.C.

12. Mr. Graham Freeman
Vice President
Labatt Breweries of B.C.
Vancouver, B.C.

13. Mr. Allan Gould
General Manager
Liquor Control and Licensing Branch
Ministry of Consumer and Corporate Affairs
Province of British Columbia
Victoria, B.C.

14. Mr. Walter Gray
Past President
B.C. Association of Broadcasters
Kelowna, B.C.

15. Mr. Gary W. Gilbert
Assistant Chief
Liquor Enforcement Division
State of Washington
Liquor Control Board
Olympia, Washington

16. Mr. Gowan Guest
Counsel
B.C. Association of Broadcasters
Vancouver, B.C.

17. Mr. Mike Haarstad
Manager
Wine and Beer Merchandizing
Safeway Stores
Seattle, Washington

18. Mr. Stan Harris
Comptroller
B.C. Liquor Distribution Branch
Vancouver, B.C.

19. Mr. Rick Hees
General Manager
Pacific Brewers Distributors Ltd.
Burnaby, B.C.

20. Mr. Robert Hendy
Divisional Manager
B.C. Division
Canada Safeway
Vancouver, B.C.

21. Mr. Walter Hogg
Brewmaster
Molson Brewery B.C. Ltd.
Vancouver, B.C.

22. Mr. Noel Hullah
President
B.C. Association of Broadcasters
Vancouver, B.C.

23. Mr. Lawson Hunter
Assistant Deputy Minister - Combines Investigation
Consumer and Corporate Affairs Canada
Hull, Quebec

24. Mr. Dave Cashin
Vice-President, Western Region
Labatt Brewing Co.
Vancouver, B.C.

25. Mr. Bill Kellogg
General Sales Manager
G. Heileman Brewing Company, Inc.
Seattle, Washington

26. Mr. John Langley
Business Manager
Brewery, Winery and Distillery Workers Union
Local 300
Burnaby, B.C.

27. Mr. Ken Lavery
Executive Director
Brewers Association of Canada
Ottawa, Ontario

28. Mr. Chris Lovelace
Ministry of Health
(former policy analyst Consumer and Corporate Affairs)
Province of British Columbia
Victoria, B.C.

29. Mr. Morgan McCammon
Chairman and Chief Executive Officer
Molson Breweries of Canada Ltd.
Montreal, Quebec

30. Mr. Russ McCurdie
Director of Public Affairs
Safeway Stores
Seattle, Washington

31. Mr. Don McDougall
President
Cockfield Brown
(former President Labatt Breweries Ltd.)
Toronto, Ontario

32. Mr. S. R. McInnes
President and Chief Executive Officer
Carling O'Keefe Ltd.
Toronto, Ontario

33. Mr. Donald J. McIntosh
Okanagan Advertising Ltd.
(Researcher for B.C. Association of Broadcasters)
Kelowna, B.C.

34. Mr. Lloyd Manuel
Executive Vice President
B.C. Hotels Association
Vancouver, B.C.

35. Mr. John Mitchell
Troller Pub and Horseshoe Bay Brewery
West Vancouver, B.C.

36. Mr. Bill Moore
Corporate Accounts Manager
Premium Distributors Inc.
Seattle, Washington

37. Mr. Hal Moran
President
Molson's Western Breweries Ltd.
Vancouver, B.C.

38. Mr. Ian Neilson-Jones
Policy Analyst
Bureau of Competition Policy
Consumer and Corporate Affairs Canada
Hull, Quebec

39. Mr. Sid Oland
President
Labatt Breweries Ltd.
Toronto, Ontario

40. Mr. George Orr
Director
Bureau of Competition Policy
Consumer and Corporate Affairs Canada
Hull, Quebec

41. Mr. Gene Paap
General Manager
Birkenwald Distributing Co.
Seattle, Washington

42. Mr. Albert Rossellini
(former Governor, State of Washington)
President
Premium Distributors Inc.
Seattle, Washington

43. Mr. Bill Sharpe
President
Old Fort Brewery
Prince George, B.C.

44. Mr. Robert Shoniker
(Brewing and Beverage Industry Analyst)
Beverage Management Resource Group
Toronto, Ontario

45. Mr. Ian Slater
Policy Legislation and Programme Planning
Ministry of Consumer and Corporate Affairs
Province of British Columbia
Vancouver, B.C.

46. Mr. Dirk Smith
Sales Manager
Birkenwald Distributing Co.
Seattle, Washington

47. Mr. Tom Sterling
Vice President - Western Canada
Molson Breweries Ltd.
Calgary, Alberta

48. Mr. Guenther Thalmann
(former President of Henninger Brewery, Hamiltonm Ont.)
Oakville, Ontario

49. Professor Donald Thompson
(former Research Director, Bryce Commission on Corporate Concentration)
Faculty of Administrative Studies
York University
Downsview, Ontario

50. Mr. Tom Tidball
Hotel Owner
Member
B.C. Hotels Association
Vancouver, B.C.

51. Mr. Robert Wallace
General Manager
B.C. Liquor Distribution Branch
Vancouver, B.C.

52. Mr. Don Wilson
Troller Pub and Horseshoe Bay Brewery
West Vancouver, B.C.

53. Mr. Vic Woodland
(former General Manager, Liquor Control and Licensing Branch)
Victoria, B.C.

Appendix II: BIBLIOGRAPHY

Anderson, D. "The British Columbia Beer Industry." Research Officer, Ministry of Finance of British Columbia. (n.d.)

> (CDN) This paper discusses the economic rents that are realized by the "big three". The social costs of elimination or reallocation of these rents are addressed. A regression of beer prices indicate that B.C.'s beer prices have risen when other provinces' beer prices have fallen. The author concludes from a regression of real wages that B.C.'s workers' incomes have started higher and have risen faster than the incomes of the "average worker". The higher wages of brewery workers could be capturing the economic rents realized by the breweries. The author then compares the risk and return of the brewing industry with other beverage manufacturers. The major brewery operations in Canada are profitable but are far from an optimal size. The optimal size increased in the early 1960's as a result of technological advances. The oligopolistic structure of the beer industry explains the existence of economic rents. The author discusses two possible solutions that will eliminate these rents: the public utilities approach and, the market approach.

"Anheuser-Busch: The King of Beers Still Rules." Business Week, 12 July 1982:50-59.

> (US) This article maps the change in Anheuser-Busch's market strategy and explains the reasons for its dominance in the American beer industry. A-B's history and the beer industry's future in mergers are briefly discussed.

Anonymous. "The Brewing Industry Today." Three Banks Review 25 (March 1955):20-30.

> (UK) Britain has seen an increase in concentration and a trend towards larger-scale operations in the brewing industry. Firms' advertising and packaging have developed the tastes of consumers. The tied house system and British consumption trends are explained (p. 23). Labour relations are briefly discussed at end of paper.

Brewers Association of Canada. Beer, Wine and Spirits: Beverage Differences and Public Policy in Canada: The Report of the Alcoholic Beverage Study Committee. Ottawa: Brewers Association of Canada, 1973.

> (CDN) This book contains a study of the role of alcoholic beverages in society and makes recommendations for policy based on non-economic factors. Short of prohibition, taxation has been proven one of the more effective methods for modifying consumption. The principal tax is the excise levy (in 1971 the typical tax was $24.96, $8.40, $4.58 on spirits, beer and wine respectively), and these taxes are equivalent in terms of absolute alcohol. The taxes increase the prices in government liquor stores, shifting the burden of the tax fully onto the consumer. Beer taxes are found to be regressive, especially at high incomes.

Brewers Association of Canada. Brewing in Canada. Ottawa: Brewers Association of Canada, April 1965.

This book describes the brewing industry from the producer's viewpoint. The book details the processes involved: different products (ale v. lager), as well as the materials used in the processes. The book briefly looks at taxes and profits of the brewing industry. Whenever there have been increases in the prices of bottled beer, consumption is affected; there is a noticeable swing to draught -- indicating once again that many beer consumer are price sensitive (p. 40). Beer is a favorite drink of people in lower income groups (p. 84).

Brewers Association of Canada. "Summary of Provincial Beer Sale and Distribution Methods." August, 1981. (Xerox).

This report summarizes the distribution methods of beer in each province.

Brewers of British Columbia. *Erosion*. The Brewers of British Columbia. (n.d.)

(CDN) In the past 20 years, 968 new listings of wine and imported beer have been introduced into B.C. The proliferation of products and changing consumer life-styles (greater mobility and shifting age patterns) have caused the erosion of the beer market. The increased use of higher-alcohol-content drinks has many social costs: lost health, pain and suffering, and cirrhosis of the liver. The Brewers' answer is lighter beers which have lower alcohol content, leading to less alcohol abuse. Tables and graphs are used to support these arguments.

British Columbia. Laws, statutes, etc. *Liquor Control and Licensing Act*, 1979. R.S. Chapter 237.

British Columbia. Laws, statutes, etc. *Liquor Control and Licensing Act*, 1979. R.S. 1979, Chapter 238.

British Columbia. Laws, Statutes, etc. *Liquor Control and Licensing Act*. Order in Council 3450. B.C. Reg 608/76. December 6, 1976.

British Columbia. Liquor Inquiry Commission. *Report, 1952*. Victoria: Queen's Printer, 1953.

(CDN) This commission sought a manner and means of distribution, and sale of liquor (spirits, wines and malt liquors) that would be most acceptable to the people of British Columbia and makes recommendations for legislation.

British Columbia. Liquor Inquiry Commission. *Report, 1970*. Victoria: Queen's Printer, 1970 (Chaired by Mr. Justice Morrow).

(CDN) This report, compiled from hearings, briefs and submissions, provides 68 recommendations to the government related to the distribution, sale and consumption of alcohol within B.C. These recommendations are summarized on p. 106.

British Columbia. Ministry of Consumer and Corporate Affairs. Liquor Distribution Branch. Marketing Research and Corporate Planning Division. "The Aluminum Beer Can." January, 1982. (Xerox).

(CDN) This report addresses the extent to which L.D.B. should encourage the use of aluminum cans. There are a number of alternatives open to L.D.B. and each is evaluated.

British Columbia. Ministry of Consumer and Corporate Affairs. Liquor Distribution Branch. Marketing Research and Corporate Planning Division. "A Critique of the 1981 B.C.H.A. Proposal: Off-Premise Sales of Packaged Beers." June, 1981. (Xerox).

(CDN) This report critiques the major points made by the B.C. Hotels Association in its submission of March 1981. A financial analysis illustrating the change in gross profits for the LDB is included.

British Columbia Association of Broadcasters (Gray, Walter). "A Petition." 1982. (Xerox).

(CDN) This petition discusses the discriminatory advertising regulation of the Provincial government, which allows alcohol advertising in the print media, but does not allow electronic media the same profitable market. Provincial alcohol consumption compared between provinces with and without regulation and suggests that alcohol consumption is influenced by many uncontrollable variables, but that electronic media advertising has little effect on aggregate consumption.

British Columbia Hotels' Association. "A Presentation to the Government of B.C. re. Off-Premise Sales of Packaged Beer by Hotels." March, 1981. (Xerox).

(CDN) B.C.H.A. recommends expansion of the sale and the distribution of packaged beer through its licensed premises. In short, the B.C.H.A. proposes that it be allowed to purchase beer at wholesale prices (14% discount) and sell at liquor store prices, with the hotel taking responsibility for empty bottle deposit and return.

Manitoba has had a hotel discount system for a "good number of years". The availability of refrigerated beer in hotels would increase beer demand in hotels and decrease beer demand in government liquor stores. The positive results are (1) the government liquor stores would be less inconvenienced by empty beer cases; (2) hotels could provide better parking and longer hours of sale; (3) hotels could control the sales to minors more easily than grocery stores.

(Attached to the B.C.H.A. proposal document is a report that advises against grocery store beer sales. A major detraction is the increased cost of distribution and government control.)

Canada. Department of Justice. Restrictive Trade Practices Commission. Report Concerning an Alleged Combine in the Manufacture, Distribution and Sale of Beer in Canada. Ottawa: Queen's Printer, 1955.

(CDN) This report covers the history and development of Canadian Breweries Ltd. leading up to the combine investigation charges. Conclusions and remedies are stated.

Canada. Royal Commission on Corporate Concentration. Study No. 1: Argus Corporation Limited, by H. T. Seymour. Ottawa: Minister of Supply and Services Canada, 1977.

(CDN) The history of Canadian Breweries Ltd. prior to E.P. Taylor's founding of Argus Corporation in 1945 is discussed. The diversification of Argus after this period is then examined.

Canada. Royal Commission on Corporate Concentration. Study No. 2:Brascan Limited, by E. R. Birkett. Ottawa: Ministry of Supply and Services, 1977.

(CDN) Brascan has a large investment in John Labatt Co. and therefore this report investigates the history of this subsidiary. Financial summaries of Labatt may be found in the appendices.

Canada. Royal Commission on Corporate Concentration. Study No. 8: The Molson Companies Limited, by M. G. Perreault. Ottawa: Ministry of Supply and Services, 1976.

(CDN) This report studies the Molson Company's acquisitions: Vilas Industries Ltd. (furniture manufacturer), Anthes Imperial Ltd. (diversified business), Beaver Lumber Co. Ltd., and Formosa Spring Brewery Ltd. Perrault brings out and comments on the important elements in these four acquisitions. Other various aspects of the Molson Company are examined. (Relevant appendices - 4, 5; Table 2; Chart A).

Canada. Royal Commission on Corporate Concentration. Study No. 11:Rothmans of Pall Mall Canada Limited and Carling O'Keefe Limited, by R. G. Shoniker. Ottawa: Minister of Supply and Services, 1977.

(CDN) The poor performance of Carling O'Keefe is examined in both the U.S. and Canada between 1970-77. Chapter 3 discusses the acquisitions of Carling O'Keefe and their effect on brewing industry concentration. This discussion was divided into 4 sections: acquisitions under E. P. Taylor 1930-46; when Carling O'Keefe was controlled by Argus Corp. 1948-68; the Combines Investigation cases 1954-60; when Rothmans acquired control of Carling O'Keefe 1969- . Shoniker concludes that the concentration of corporate power rests with the government, because pricing, distribution and promotion are strictly regulated by government. These controls have caused companies to abandon plans for entry into the industry.

Cockerill, Anthony. "Mergers and Rationalization in the British Brewing Industry." The Brewer 60(717) (July, 1974):105-114.

(UK) This paper examines the decline in the number of brewing firms in Britain from 170 in 1958 to less than 100 at the time of the study. The actual number of breweries had fallen from 400 to about 180 over the same period. This paper outlines the economic factors which have encouraged this increase in concentration and examines the ways in which rationalization has been achieved and accesses the effectiveness of the increased activity. Future industry prospects are examined.

Denny, M., and May, J.D. "Regional Productivity in Canadian Breweries." Canadian Journal of Regional Science 3(2) (1980):209-226.

(CDN) This article provides a comparison of supply, price, output, plant size and total factor productivity for breweries across provinces, for the period 1961-1975. The major finding is that productivity patterns have changed little over time, with Quebec and Ontario having the highest and the Atlantic provinces the lowest levels of productivity. British Columbia, however, experienced a sharp decline over the 15 years of the study. Plant size is a major factor in overall productivity, while demand, growth and output price are less important.

Dixon, C. "Changing Structure of British Brewing Industry." Geography 63, No. 279 (1978):108-113.

> (UK) The present closures and concentration of production at a small number of sites represent the final stages in the long term changes in the brewing industry over the past 50 years. Brewing is dominated by 7 firms. These firms have become more vulnerable to takeover with the incursion of non-brewing interests. With increased transport costs and economies of scale accompanying large runs, there are fewer brands and there is an increase in rural small-scale plants. During periods of recession firms will sell out or amalgamate to maintain levels of profitability.

Duffy, Martyn. "The Effect of Advertising on the Total Consumption of Alcoholic Drinks in the United Kingdom: Some Econometric Estimates." Journal of Advertising (1982): 105-117.

> (UK) This paper describes an econometric study using aggregate time series data to investigate the influence of prices, income and advertising upon the demand for alcoholic drink in the U.K. Income appears to have a large effect on the demand for beer, spirits and wine (all analyzed separately), and price elasticities are in most cases low. There is no evidence to link advertising and consumption of alcoholic drinks; in fact it is doubtful that advertising has had any expansionary effect on total beer consumption.

Elzinga, K. G. "The Restructuring of the U.S. Brewing Industry." Industrial Organizational Review (1973):101-114.

> (US) This article documents the changes taking place in the structure of the U.S. brewing industry and explores three changes: mergers, economies of scale, and product differentiation. Economies of scale are the dominant cause but they also play a complementary role with product differentiation in increasing industry concentration. Data are presented on the brewing plants which met their demise during the period 1958-1972.

Elzinga, K. G. "The Beer Industry." In The Structure of American Industry, pp. 221-249. Edited by Walter Adams. New York: MacMillan Publishing Co., Inc., 5th edition, 1977.

> (US) A brief history of the brewing industry shows in table form the increase of concentration and reasons are given for the increase. MES is found to be 1.25 million barrels per year. Economies of scale and barriers to entry are discussed (p. 233). The charge against Anheuser-Busch for price discrimination is examined, no data is used for any pricing conclusions. There is no evidence of collusion; but nonprice methods used provide consumers with a decrease in choice.

Elzinga, K. G. "The Beer Industry." In The Structure of American Industry, p. 218-248. Edited by Walter Adams. New York: Macmillan Publishing Co., Inc., 6th edition, 1982.

> (US) This more recent edition updates the figures used in the analysis of the American beer industry, using data as recent as 1980. The updated tables show more clearly the trends in the brewing industry (esp. tables 2 and 4). There has been a sharp escalation in advertising beginning in 1976-77. Another addition is Miller's use of Philip Morris personnel in the realignment of Miller's beer. The pricing discussion is lengthened; discussed are "questionable payments" and price affirmation laws. Small sections on productivity and R&D are added.

Fraundorf, K. C. "The Social Costs of Packaging Competition in the Beer and Soft Drink Industries." Antitrust Bulletin 20, No. 4 (Winter 1975):803-831.

(US) The packaging of beer (nonprice competition) has led to social costs in the form of litter (no-deposit containers). The cost of handling empty bottles can be shifted from society, by producing returnable bottles, to the consumer (in his time returning the bottles). All participants suffered profit declines using non-returnables. Once a climate of nonprice competition is established, it may be impossible to reverse.

Goldmann, J. "Beer in Wartime: Dilution versus Concentration." Oxford University Institute of Statistics 4, (October 1942):287-290.

Great Britain. Parliament. House of Commons. The Monopolies Commission. Beer: A Report on the Supply of Beer. (H.C. 216). London: HMSO, April 1969.

(UK) The supply of beer was investigated in this report pursuant to the British Monopolies and Restrictive Practices Act 1948. Brewers' ownership of licensed premises is investigated along with their costs and profits.

Great Britain. Parliament. National Board for Prices and Incomes. Report No. 13: Costs, Prices and Profits in the Brewing Industry. (Cmnd. 1965). London: HMSO, April 1966.

(UK) This report examines the structure of costs and prices in the brewing industry and also the level of profits under the arrangement of the "early warning" system of price increases. The government receives notification from the brewers when the wholesale price of beer is to be increased. The conclusion states "an inability to secure capital required did not justify an increase in price."

Great Britain. Parliament. National Board for Prices and Incomes. Report No. 136: Beer Prices. (Cmd 4227). London: HMSO, November 1969.

(UK) This report examines the structure of costs and prices, including retail mergers, in the brewing industry with emphasis on return on capital and the industry's ability to finance its capital investments. The prices of beer in bars other than public bars is not subject to the early warning notification. In order to examine retail margins, the commission surveyed both tenanted and managed houses in England and Wales.

Great Britain. Parliament. House of Commons. Price Commission Whitbread and Company Ltd - Wholesale Prices and Prices in Managed Houses of Beer, Wines, Spirits, Soft Drinks and Ciders. (H.C. 110). London: HMSO, June 1979.

(UK) This report investigates the price increases of Whitbread and Company Ltd. under section 2 of the Price Commission Act 1977 and makes recommendations regarding the price increases.

Greer, D. F. "Product Differentiation and Concentration in the Brewing Industry." Journal of Industrial Economics 19(3) (July, 1971):201-219.

(US) This paper hypothesizes the relationship between sales promotion and concentration, best explained by the cost-price squeeze of the late 1950's and early 1960's. The price squeeze decreased profit margins and contributed to mergers. A previous study by the Horowitzes does not give

advertising priority when studying cost trends. The 1950 prices did not reflect the competition, and the cost-price squeeze must be analyzed on the cost side as the Horowitzes' do ("Firms in a declining market ...," 1965). This paper comments on that analysis with regard to transport, unions, materials and non-price competition.

Greer, D. F. "The Causes of Concentration in the U.S. Brewing Industry." California State University (Xerox). (n.d.)

(US) Greer attributes the industry concentration to economies of scale as well as his earlier-hypothesized product differentiation. He shows how much concentration has increased: in 1940 there were 400 companies; in 1979 there were fewer than 50. Four possible causes are investigated: (1) mergers, (2) economies of scale, (3) ruinous or predatory pricing, (4) product differentiation. The multi-plant economies which exist consist largely of a high-quality image which local or regional beers lack. This image is classified by Greer as a product differentiator. Moderate price competition has contributed to the exit of many small brewers and the increase in concentration. Greer views advertising as an increasing function of concentration until concentration becomes high, then advertising decreases. The Miller company is studied with respect to the cost-price squeeze caused by advertising.

Hackleman, Jr., E. C., and Siegert, S. K. "Another Look at the Beer Industry." Marquette Business Review 19(3) (Fall, 1975):108-116.

(US) The authors examine the top breweries: background, pricing, market, environmental concerns and advertising strategies. To prosper today, a brewery requires high volume, efficient plants and strenuous marketing. The larger firms' pricing policies have contributed greatly to the demise of the smaller firms. The higher costs of transporting beer necessitated a higher price, thus the emergence of the "premium beers". Today there is little difference in quality and production costs between popular-priced and premium beers. The beer's image sells the product.

Hall, G. C. "The Effects of Mergers on the Product Mix by the Brewing Industry." Applied Economics 11(1) (March, 1979):21-34.

(UK) This paper argues that the introduction of the keg was a result of the restructuring of the brewing industry. Regression analysis compared keg (when the brewing process is completed at the brewery) and draught beers. "Keg beer" made economies of scale viable because it could be transported over longer distances, and as firms merged, to exploit these economies, keg beer led to mergers. The power of advertising contributed to the success of keg beer.

Hardy, K. G., Pearce, M. R., Kinnear, T. C., Ryans, A. B. Canadian Marketing: Cases and Concepts, Chapter 41, "Alcohol Advertising." Toronto: Allyn and Bacon Canada, 1978.

(CDN) This chapter discusses the development of advertising regulation in the alcohol beverage industry. Alcohol abuse has led the government to take a stand on the issue. Exhibits show letters concerning this problem. The appendices have statistics on alcohol abuse and summaries of the regulations enacted in each province.

Hatten, K. J. and Schendel, D. E. "Heterogeneity Within an Industry: Firm Conduct in the U.S. Brewing Industry." Journal of Industrial Economics 26(2) (December, 1977): 97-113.

> (US) This study of intra-industry competition states size is not the only factor affecting "market-structure/profitability" relationships. This paper proposed: profitability = f(market conduct, market structure). Previous literature focused on groups, not firms; the researchers had not tested for homogeneity on a firm-by-firm basis. The model used by the authors subscribes to the 'conduct' type of explanation of profitability, in 2 areas: manufacturing and marketing. Eight variables are used for 13 firms between 1952-1971 (cross-sectional and time-series). This paper shows that the relationships between managed variables (conduct) and the structural environment of an industry are not always constant within an industry.

Hatten, K. J., Schendel, D. E. and Cooper, A. C. "Strategic Model of U.S. Brewing Industry, 1952-71." Academy of Management Journal 21(4) (1978):592-610.

> (US) This article is an empirical study of the relationship between alternative strategies and profit performance. Performance (measured as profit/growth) = f(controlled strategic variables; or noncontrollable environmental variables). Business strategies differ in manufacturing, financing and marketing. These areas are compared using time-series data. The differing results for large and small firms suggest a heterogeneous brewing population; a single model would not provide estimates for management use. Seven different equations were used, one for each homogeneous group. The variable coefficients support the strategy concept that different firms can (and must) use different resource deployments to compete successfully.

Hawkins, K. and Radcliffe, R. "Competition in the Brewing Industry." Journal of Industrial Economics 20(1) (November, 1971):20-41.

> (UK) This paper comments on the Monopolies Commission's report on the compatibility of the tied-house system with the public interest. In the UK (for a variety of historical reasons, both economic and social) a few large firms control the supply of beer, largely through tied outlets. The tied house system provides a framework for brewers to achieve the economies of production and distribution (also a barrier to entry).

Hawkins, K. "The Price Commission and the Brewing Industry: A Critical Note." Journal of Industrial Economics 27(3) (March, 1979):287-294.

> (UK) This paper addresses the social benefit/cost of the tied house system. The author criticizes the Price Commission's use of rate of return to conclude that small firms are more efficient. The clear distinction between horizontal and vertical mergers made in this paper points out the Price Commission's neglect to do the same. Also neglected in the Price Commission's report is a social benefit/cost analysis.

Hinnegan, K. A. "The U.S. Antitrust Doctrine of Potential Competition and Canadian-U.S. Corporate Mergers: The Labatt-Schlitz Case." Western Law Review 7 (1968):60-92.

(US) The Brown Shoe case set forth the "incipiency" doctrine. This paper addresses the development and judicial rise of Sec. 7 of the Clayton Act. From the Brown Shoe case through U.S. v. El Paso Natural Gas Co., U.S. v. Penn-Oil Chemical Company, U.S. v. Continental Can Company the author draws inferences about the legality and likelihood of future Canadian mergers with American firms.

Hogarty, T. F. and Elzinga, K. G. "The Demand for Beer." *Review of Economics and Statistics* 54(2) (May, 1972):195-198.

(US) A summary of the available knowledge on the demand for beer begins the paper. The authors use data from 1956-1959 for a regression to arrive at the income elasticity and demand elasticity for beer (n = 180). The regression provides estimates for excise tax policies and consumption levels.

Horowitz, A. and Horowitz, I. "Beer Industry (editorial)." *Business Horizon* 10(3) (1967):5-19.

(US) This paper emphasizes the price difference between "premium" and "popular" beers, and the demand for beer. Advertising, giving brand and quality distinction, replaces price competition in the "monopolistic competition" of the brewing industry. (Information on advertising is scarce). 100,000 barrels/yr. minimum constitutes an efficient scale of operation. Mergers in most instances involve firms that would have disappeared; when this is not the case antitrust laws should be applied.

Horowitz, A., and Horowitz, I. "Concentration, Competition and Mergers in Brewing." In *Public Policy Toward Mergers*, pp. 45-56. Edited by J. F. Weston and S. Peltzman. Pacific Palisades, Calif.: Goodyear Publishing Companv, Inc., 1969.

(US) This article discusses the brewing industry's trend toward fewer brewers and increasing concentration. This concentration, the authors state, cannot be necessarily equated with the degree of competition. This paper suggests that detailed economic data is essential when evaluating the competitive nature of an industry.

Horowitz, A. and Horowitz, I. "Entropy, Markov-processes and Competition in the Brewing Industry." *Journal of Industrial Economics* 16 (July 1968):196-211.

(US) This paper supports previous arguments in an earlier paper (Horowitz and Horowitz [1965]). An equation for entropy is developed which answers how competitive an industry is, and an equation is developed which shows how competitive the industry is relative to how competitive it could be. The resulting Markov matrices do suggest that there will be a sharp and continued decline in the number of firms in the brewing industry in the U.S.

Horowitz, A. and Horowitz, I. "Markov Processes and the Declining Brewing Population." *American Statistical Association, Business and Economics Section, Proceedings*. (1967):433-438.

Horowitz, I. and Horowitz, A. "Firms in a Declining Market; the Brewing Case." *Journal of Industrial Economics* 13 (March 1965):129-153.

(US) This paper discusses recent trends in the brewing industry. A regression is developed for the demand for beer, using taxes and personal income as endogenous and exogenous factors respectively. Another regression shows one coefficient to be the Minimum Efficient Scale of 100,000 barrels. This regression uses the production of beer as the dependent variable and the independent variables are: the number of breweries, total beer consumption, and a dummy (national brewery present/or not present).

Horowitz, I. and Horowitz, A. "Structural Changes in the Brewing Industry." Applied Economics 2, No. 1 (May 1970):1-14.

(US) This paper extends Horowitz and Horowitz (1968), by (1) decomposing the entropy measure to identify the causes of increases in brewing concentration and (2) developing a long-run entropy measure for the industry. The paper begins by explaining entropy as in the 1968 paper. This extension supports previous contention that smaller brewers are unable to compete due to high costs and demand characteristics, not the absence of national dominance. The underlying causes of the declining entropy involve population shift, mergers and decentralization.

Hunter, N. "Hard for Small to Survive in Brewing." Globe and Mail, 31 (May, 1982):B2.

(CDN) This report briefly discusses each independent brewer in Canada. There are 5 independent brewers in Canada: Moosehead Breweries Ltd. of St. John, N.S.; Amstel Brewery Holdings Ltd., Hamilton Ont.; Rocky Mountain Breweries Ltd., Hamilton, Ont.; Old Fort Brewing Co., Prince George, B.C.; Northern Breweries, Sault Ste Marie, Ont. The marketing strategy and industry position of each firm is discussed.

Johnson, J. A. Taxation of Alcoholic Beverages in Canada: An Economic Evaluation. A sub-report commissioned for the Alcoholic Beverage Study Committee. Ottawa: Brewers' Association, September, 1972.

(CDN) The purpose of this study is to analyze the differences in alcoholic beverages in Canada (beer, wine, spirits). Arguments are given for the differential taxation of the three, drawing from statistical studies and other information sources.

Jones, J. C. H. "Competition in the Canadian Beer Industry." Unpublished Ph.D. dissertation, Queen's University, 1965.

(CDN) Jones reviews the Supreme Court of Canada's charge against Canadian Breweries Ltd. in 1959 under the Combines Investigation Act, R.S.C. 1952, Section 2(a)(vi). In doing so, Jones covers the pertinent economic theories; Canadian Breweries' history from 1930-1960; and Canadian beer industry characteristics -- the history, relevant market, market structure and conduct, barriers to entry and market performance.

Jones, J. C. H. "Mergers and Competition: The Brewing Case." Canadian Journal of Economics and Political Science 33 (1967):551-568.

(CDN) This paper reevaluates the "Brewing Case" with economic criteria. Mergers which enhance market power to an unreasonable degree, without the benefits of real scale economies, are not in the public interest. The provincial authorities' price fixing is the defense of the "big three" (breweries) for price uniformity and protection of the public interest. Price is covertly set on a joint profit maximization basis by the brewers. The impregnable position of the "big three" is not justified by real scale economies. Since 1930 the market structure has gone from one of numerous small producers to one of three dominant manufacturers.

Kardasz, S. W. "Price-Cost Margins and Measured Concentration in Canadian Manufacturing." University of Waterloo. (Xerox). No date.

(CDN) Kardasz proposes that price-cost margin (PCM) is a superior method to the rate of return for the study of merger effects. The purpose of the paper is to examine the relationship between PCM and concentration of a sample of manufacturing industries. The study concludes that the price-cost margin is a U-shaped function of the measured industry concentration. The quality of data must be improved, however, before cross-section studies can aid antitrust policy makers.

Loewen, Ondaatje, McCutcheon and Company Ltd. Monitor Report: The Canadian Brewing Industry -- Facts, Figures and Forecasts. Toronto: Loewen, Ondaatje, McCutcheon and Company Ltd., December, 1980.

(CDN) This report provides advice for a potential investor in the Brewing Industry.

Loewen, Ondaatje, McCutcheon and Company Ltd. Monitor Report: John Labatt Ltd. Toronto: Loewen, Ondaatje, McCutcheon and Company Ltd., August, 1981.

(CDN) This report describes and discusses Labatt as a potential investment. The brewing group is examined in particular, and the success of Budweiser in Canada is highlighted.

Manitoba. The Public Utilities Board. Order No. 18/82. February 5, 1982.

(CDN) The Public Utilities Board considers applications for brewery price increases as proposed by the Liquor Control Commission. The indexing of prices paid to brewers was approved by the Board. The Board examined manufacturing costs, distribution, head office charges, marketing expenditures, export sales and beer prices (compared provincially) to justify the price increases.

McCafferty, R. J. and McCullough, F. T. "Canadian Brewing Industry (Industry Review)." A. E. Ames/Dominion Securities. March 16, 1982.

(CDN) This report outlines the structure of the Canadian brewing industry, the factors affecting the supply of and demand for beer and the major issues of the day facing the brewers. As well, a brief overview of each of the major domestic brewers is given.

Molander, J. D. "Local Breweries and the College Market: Analysis of a Market Segment." Marquette Business Review 14(3) (Fall, 1970):126-133.

(US) This paper outlines a study of 11,000 university students at a Wisconsin university. The study was designed to provide information concerning the size of the student market, the beer drinking patterns, the brand preference of students, and the students' image of local and national brands. The typical student in this market consumed 37 gallons of beer annually, totalling 400,000 gallons per year, which is 2/3 of the local production. For the 3 national firms, Anheuser-Busch, Schlitz and Pabst, penetration of this market was double that of the national average. College students perceived local beer to be associated with people of a lower status. Sales promotion techniques are needed to overcome the brand image problem.

Muller, J. and Schwalback, J. "Structural Change in West Germany's Brewing Industry: Some Efficiency Considerations." Journal of Industrial Economics 28(4) (June, 1980):353-368.

(GE) This paper examines flattening the cost curve of firms (through specific examples) using a more realistic account of depreciated capital structure. An increase in the number of brands produced reduces efficiency. Trade-offs between product choice and production costs exist (efficiency loss estimated, p. 360). West Germany has not taken advantage of scale economies, unlike the U.S., U.K., and Sweden. The MOS (minimal optimal plant size) is discussed and estimates of MOS are provided.

Ornstein, S. I. and Hanssens, D. M. "Alcohol Control Laws, Consumer Welfare and the Demand for Distilled Spirits and Beer." Working Paper Series No. 162, March 1981. University of California, Los Angeles.

(US) This paper examines alcohol control laws within the framework of a welfare trade-off model between the social cost savings of restricted consumption and the monopoly welfare losses due to anticompetitive control laws. The main determinants of the estimated demand are price, income, and interstate travel. Control laws are of minor importance. The non-trivial monopoly welfare loss suggests that anti-competitive control laws are inefficient in reducing drinking externalities.

Ornstein, S. I. "Antitrust Policy and Market Forces as Determinants of Industry Structure: Case Histories in Beer and Distilled Spirits." The Antitrust Bulletin 26(2) (Summer, 1981):281-313.

(US) The author examines antitrust action under Sec. 7 of the Clayton Act, in the brewing industry. Nine merger cases were undertaken between 1958 and 1972. The larger national firms now grow internally; the merger cases halted their expansion by merger. The government antitrust action has not decreased the concentration in the brewing industry. The government only delayed the firm's attainment of efficiency and therefore the consumers have not benefited by government action. Concentration is also high in other countries: Denmark, Netherlands, Ireland, Portugal, Sweden and West Germany.

Quebec. Laws, Statutes, etc. Liquor Corporation Act, 1971. Chapter 20.

Scherer, F. M. "The Determinants of Industrial Plant Sizes in Six Nations." The Review of Economics and Statistics 55(2) (May, 1973):135-145.

This paper analyzes the reasons for variations in plant sizes across 12 industries (incl. beer) and 6 nations (incl. Canada). The data are drawn from statistical publications, trade journals and interviews. The paper concludes that plant size variations are systematically associated with market size, the degree to which sales are concentrated in the hands of a few leading producers and a set of variables reflecting the cost-minimizing decisions made by firms.

Seldon, Arthur. "The British Brewing Industry." *Lloyd's Bank Review* 30(October, 1953):30-44.

(UK) This article describes the British brewing industry when family ownership and control were prevalent. The brewing process, distribution, demand, and licensing are all examined.

Sherbaniuk, J. A. "Regina v. Canadian Breweries Limited: An Analysis of a Merger Case." D.B.A. dissertation, University of Washington, 1964.

(CDN) This dissertation investigates the merger case *Regina v. Canadian Breweries Limited* (1960). The author includes a review of the pertinent legal and economic aspects, a critical evaluation of the transcript of the trial proceedings; an analysis of the reasoning and conclusions of the court; and an economic analysis of some issues central to the case.

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(US, CDN) The first part of this report compares the U.S. distribution/sales network and taxation policies to those of Canada. Beer distribution differs more than wine and spirits distribution in the U.S. and Canada (summary and conclusion on p. 12). Part II deals with the overall trends of consumption. The U.S. market is a leading indicator of possible future trends of the Canadian market. (summary and conclusion on p. 33).

U.S. Federal Trade Commission. Bureau of Economics. *The Brewing Industry*, by Charles F. Keithahn. Washington, D.C.: Government Printing Office, 1979.

(US) This report is a study in the structural change and performance in the brewing industry since WW II. Keithahn concludes that the increase in national four and eight-firm concentration has not led to a less competitive market but on the contrary, firms have become more competitive and performance has been good.

Ward, Joseph B. and Associates. "Beverage Operations: A Market Analysis." April, 1978.

(CDN) This study reassesses the pricing policies of retail alcoholic beverages and suggests that prices be freed from government control and that the market be allowed to set prices. To protect the market from monopolies, the report recommends that a minimum price be established for alcoholic beverages. In addition, it is recommended that the types of beverage rooms be changed to be similar to Neighbourhood Pubs.

Weiss, L. W. "An Evaluation of Mergers in Six Industries." *Review of Economics and Statistics* 47 (1965):172-181.

(US) This paper focuses on the roles of mergers and various other influences in the changes of the 4 and 8-firm concentration. M.E.S. and sub-optimal plant sizes are estimated. Internal growth and firm exit are more closely related to changes in concentration at the 4-firm level than merger is. Mergers become important when more firms are considered.

CASES

Valley Salvage Ltd. et al. v. Molson Brewery B.C. Ltd. et al. (1976) 1 W.W.R. 597;

Regina v. Canadian Breweries Ltd. (1960) O.R. 601; 33 C.R.1; 126 C.C.C. 133.

POOR

QUALITY

ORIGINAL